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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 early 2017, the Iowa Department of Homeland Security (IHS) issued a Notice of Funding Available (NOFA) through the Hazard Mitigation Assistance (HMA) grant program specifically referencing the then-current multi-jurisdictional county plans set to expire in 2019. This notice was provided to County Emergency Management Agencies (EMA) in Iowa and communicated through the Iowa Association of Councils of Government (ICOG). Through the notice of interest and application process, IHS rescinded eligibility of single-county plan applications and determined that only Regional Plan applications would be considered. Regions are specified as including at least two counties. Represented under a common Council of Governments (COG), each with current plans expiring in 2019, and in appreciation of the financial support as potentially available through this funding program, Cherokee, Ida, Monona, Plymouth, and Woodbury County EMAs discussed the practicality of a regional plan covering all five counties. 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. Each county, as duly agreed upon, is responsible for its respective share of the required twenty-five percent (25%) local cash match.

### B. Planning Area

Having several transportation, community development, and economic development committees in place within the planning boundary, the EMAs determined that including all five

## Amendments shown in RED

counties into the scope of a regional plan would be mutually beneficial. Therefore, this Regional Hazard Mitigation Plan includes community capabilities, hazard analysis and risk assessment, and mitigation actions and strategies for each jurisdiction within Cherokee, Ida, Monona, Plymouth, and Woodbury Counties in Iowa. 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) – 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 G Mitigation Actions, Strategies, & Projects, Article 3 Identified Actions, Strategies, & Projects*. An amendment and subsequent adoption at the local level enables jurisdiction 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 hazards and risks uniformly 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 with jurisdiction name specified. 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.

**Amendments shown in RED**

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
* Brunsville	Kingsley	* Oyens	Westfield
* Craig	Le Mars	Remsen	

Woodbury County, its unincorporated area and the cities of:

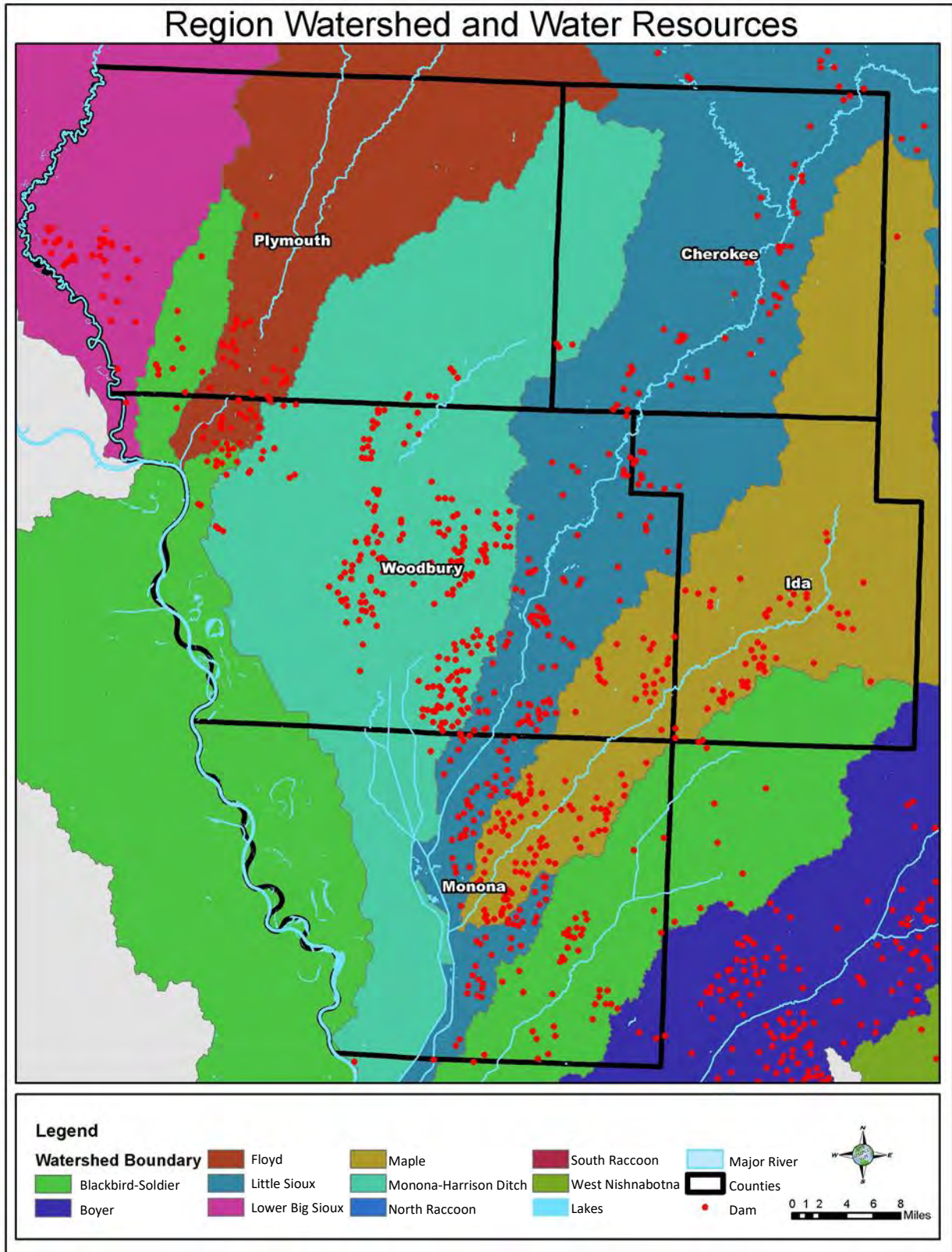
Anthon	Cushing	Lawton	Pierson	Sioux City
Bronson	Danbury	Moville	Salix	Sloan
Correctionville	Hornick	Oto	Sergeant Bluff	Smithland

Public School Districts serving the Region

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

*\* Denotes jurisdictions that are included but are NOT classified as “Participants” under FEMA guidelines requiring a specific mitigation action, strategy, and/or project included in this Plan. Such noted jurisdictions are required to amend, and adopt by resolution, the Plan at the local level to be eligible to apply for PDM funds for mitigation projects.*

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.

### *Landforms & Geography*

The Region is characterized by four (4) landforms. As provided by the Iowa Geological Survey (<https://www.ihr.uiowa.edu/igs/alluvial-plains/>), the following map shows how those designations lie within our county borders. Information specific to each County is included in respective profiles.



The Missouri Alluvial Plain was formed by erosion and sediment deposits resulting from the Missouri River. This landform region is characterized by backwater sloughs and oxbow lakes. There is also greater potential for flooding within this region.

The remaining three landform regions are noted as being fashioned by ancient glaciers. The Northwest Iowa Plains and Southern Iowa Drift Plains are marked by rolling hills resulting from the manipulation of glacial sediment deposits by glacial melt and streams. The Loess Hills are unique to western Iowa and northwest Missouri and are notably represented in Woodbury and Monona counties. This landform was created from the accumulation of wind-blown silt. Today, these steep hills rise from the surrounding landscape.

### C. Funding

As discussed in background information, this plan is made possible through Pre-Disaster Mitigation funds available from the Federal Emergency Management Agency (FEMA) and allocated by the Iowa Department of Homeland Security (IHS) accounting for seventy-five percent (75%) of development and production costs. Plymouth County received notification of the award, effective July 16, 2018 pending a State-facilitated grant agreement discussion. The sub-award agreement was processed and signed by participating Counties. Notification of agreement approval and active status was received August 28, 2018. Cherokee, Ida, Monona, Plymouth, and Woodbury Counties named SIMPCO as contractor for the project with Plymouth County acting as fiscal agent. SIMPCO board of directors approved the contract with Plymouth County October, 2018.

### D. Region Planning Team

Beginning with EMAs from each County, SIMPCO organized the lead Regional Planning Team to include Duane Walhof – Plymouth County EMA, Justin Pritts – Cherokee County EMA, Ed Sohm – Ida County EMA, Patrick Prorok – Monona County EMA, and Rebecca Socknat – Woodbury County EMA. Additional counsel was provided through existing committees and respective members including Region IV LEPC, the SIMPCO Water Resource Committee, IaDOT Region Director – Dakin Schultz, the SIMPCO MPO and SRTPA in addition to SIMPCO Staff – Michelle Bostinelos, Erin Berzina, Gabriel Appiah, Alejandra Quintana, Maria Lancto, Sharon Burton, and Dawn Kimmel.

#### E. Plan Development & Data Collection

The Plan is presented in a format consistent with guidelines as provided through FEMA, IDHS 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. Initial communications were provided to administrative offices of each jurisdiction, including respective school districts via email. Regular mail communications are documented within the profiles of communities where such communication mode was preferred. Communication included links and file attachments referencing the 2014 Multi-Jurisdictional Hazard Mitigation Plan. A printed planning packet was delivered to each of the cities. Documents centered on planning preparation included worksheets to aid in the organization of data in the following sets: Contractor (SIMPCO) preliminary Schedule of Tasks, Mitigation Planning Team, Capability Assessment, Safe Growth Audit, National Flood Insurance Program (NFIP), Hazard Summary, Definitions for Classifications, Mitigation Action tracking, Mitigation Action Implementation tracking, and Mitigation Action Progress Report forms. A planning meeting was scheduled with each jurisdiction. As shown in Appendix B: Planning Process Documentation, attendance at each meeting was recorded. An example of each document in the planning packet is also included.

For the purpose of reducing redundant information, the Plan is organized to include as much data as possible as it applies to the region, then county, then jurisdiction. Therefore, it is important to conduct a review of Region and appropriate county sections in addition to a given jurisdiction to ensure all pertinent information is considered.

#### F. Profile Organization

A profile is included for each level of information— region, county, and jurisdiction, 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. To reduce redundancy, the following is a summary of the sections as included under each profile.

### *Community Profiles*

A community profile has been completed for each jurisdiction participating in this Plan. Each includes an assessment of local governance, community supports, demographics, and available economic data, and identification of critical facilities. 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 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 should be 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. While the above provision may not be 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.

### *Capabilities*

Capabilities are disseminated in a manner similar to all 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 2014 Plan.

### *Mitigation Goals, Actions, and Strategies*

Specified projects based on Region Mitigation Goals in Title III, Section F as they correspond to Section G. *Region Mitigation Action and Strategies*, will be included in the jurisdiction profile. Local actions and strategies reflect that community's interest in regard to their own primary 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

As a means of improving public comment in light of traditionally low turnout at public comment-specific meetings, the Region planning team determined additional efforts were necessary to capture input during the development of this Plan. The Region team and project coordinator discussed public venues and events with reliably high or consistent participation or attendance. Each jurisdiction was contacted to determine appropriate venues specific to their area. County Fairs and Congregate Meal Sites (CMS) as coordinated through Connections Area Agency on Aging (CAAA) were identified as well-attended routine events where attendees typically have a vested interest in the general functions and wellbeing of their home City. At each venue willing to participate, a display board, comment cards, and a collection envelope were provided. Examples of the display board and comment cards are available for review in Appendix B: Planning Documents. Comment cards provided means of noting County as well as Jurisdiction. Comments are appropriated to the indicated county in general terms and referenced back to the City or School District when specified. In addition to the Fairs and CMS, a few communities hosted a display during their respective Community Day(s) festivals. All informal public input collection locations are discussed within the applicable jurisdictions.

An Open Period for Public Input and Comment was published in all news publications within the five-County Region beginning October 28, 2019 and continuing through November 27, 2019, providing a link to an online survey and an online posting of the 2014 County Multi-Jurisdictional Hazard Mitigation Plan for each participating County. Respondents were invited to submit comment via the survey link, in person at SIMPCO, mail, phone, or email. The publication notice is available for review in Appendix B: Planning Process Documentation. It is important to note that some comments as received do not specifically relate to the Regional Hazard Mitigation Plan. Such comments are noted but are not included in the risk analysis for the noted jurisdiction. A summary of collected comments is included in Section d. *Risk Assessment* analyses for respective jurisdictions.

#### H. Amendments and Plan Maintenance

For projects to be eligible for Pre-Disaster Mitigation or BRIC 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 every five (5) years). Each jurisdiction 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 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 Office. Progress of mitigation projects shall be reported to the County EMA on an annual basis at minimum. School districts are encouraged to maintain record of actions/strategies/projects for review by the Emergency Management Office. 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.

#### 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 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 2018 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 2014 County Multi-Jurisdictional Hazard Mitigation Plan addressed hazards as identified in that plan as shown in the table below.

<b>Hazards Identified 2014 Multi-jurisdictional Hazard Mitigation Plans</b>	
1 Animal/Crop/Plant Disease	8 Grass or Wildland Fire
2 Dam Failure/Levee Failure	9 Landslide
3 Drought	10 River Flooding
4 Earthquake	11 Severe Winter Storm
5 Expansive Soils	12 Sinkholes
6 Extreme Heat	13 Thunderstorms & Lightning /Hail
7 Flash Flood	14 Tornado/Windstorm

### 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. The following natural hazards are included in the 2018 ISHMP.

<b>Hazards Included in 2018 Iowa State Hazard Mitigation Plan</b>	
1 Dam Failure/Levee Failure	8 Grass or Wildland Fire

2	Drought	9	Landslide
3	Earthquake	10	Severe Winter Storm
4	Expansive Soils	11	Thunderstorm - Hail & Lightning
5	Extreme Heat	12	Tornado/Windstorm
6	Flooding – <i>Flash and Riverine</i>	13	Other Hazards
7	Sinkholes		

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”.

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

## B. Definitions & Regional Impacts

Following are the descriptions and/or definitions of State-Identified Natural and Other Hazards as included in the 2018 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 as to reduce redundancy. More information about Iowa’s hazard definitions can be found in the state plan and in references as provided.

### 1. Dam/Levee Failure

At the time of this update, dam and levee failure, whether due to compromised structure or breaching, has had a devastating effect for communities in western Iowa and the majority of the neighboring state of Nebraska. As detailed within the profile for Hornick, Iowa, unique weather and ground conditions contributed to mass flooding in March 2019. Frozen ground elevated runoff flow rates from heavy rainfall and rapid snow melt, in turn causing breached levees and dams and perhaps most notably, the collapse of the Spencer Dam in Nebraska. A combination of aging infrastructure and ever-changing weather conditions has escalated the

need for mitigation to include anticipated failure of established protections. Details about the 2019 dam and levee failures are not formally available at the time of Plan preparation. However, communities impacted by such events have included discussion regarding needed actions/strategies within the context of respective community profiles. Planned projects include a raised levee wall (Hornick) and consideration for straightening a river by way of controlled channeling (Le Mars). Less costly projects include better communications of road closures (Hinton) and equipment to more effectively establish restricted boundaries.

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 have to be met when that dam is constructed or modified. There are three dam classifications: high hazard, moderate 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* – [indication that] dam is located in an area where dam failure may create a serious threat of loss of human life
- *Moderate (Significant) Hazard* – [indicated as such] 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* – [indication that] 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 Iowa DNR. Dams of particular significance to a given community are noted within the discussion points of relevant jurisdictions. Collected in August of 2019, The Iowa Dam Inventory includes 732 dams within the region. Of that total, 43 are noted as *Significant* or *High* potential for risk under Hazard Classification. Overall, 34 are rated under Condition Assessment – 1 @ Unsatisfactory, 3 @ Poor, 3 @ Fair, and 27 @ Satisfactory. One dam classified with satisfactory and one rated as poor carry a low hazard risk classification, both receiving those ratings on July 22, 2019. Eleven dams with significant hazard risk classification 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 + = Outside Region*

<b>Dam Name</b>	<b>NIDID</b>	<b>Hazard Classification</b>	<b>County</b>	<b>Last Inspection Date</b>	<b>Condition Assessment</b>	<b>EAP</b>
Held Watershed Site E-3	IA01857	High	P	7/17/2018	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	7/18/2019	Satisfactory	Y
Smokey Hollow Subwatershed Site 4	IA02310	High	W	7/10/2018	Fair	Y
Bacon Creek Watershed Site A-1-1	IA01796	High	W	7/18/2018	Satisfactory	Y
Bacon Creek Watershed Site A-2-4	IA01791	High	W	7/18/2018	Satisfactory	Y
Bacon Creek Watershed Site A-3	IA01797	High	W	7/18/2018	Satisfactory	Y
Bacon Creek Watershed Site A-3-1	IA01795	High	W	7/18/2018	Satisfactory	Y
Bacon Creek Watershed Site C-1	IA01685	High	W	7/18/2018	Satisfactory	Y
Glen Ellen Subwatershed Site 3-1	IA01254	High	W	7/17/2018	Satisfactory	NR
Glen Ellen Subwatershed Site 3-2	IA01253	High	W	7/17/2018	Satisfactory	NR
Smokey Hollow Subwatershed Site 1	IA02311	High	W	7/10/2018	Satisfactory	Y
Smokey Hollow Subwatershed Site 2	IA02312	High	W	7/10/2018	Satisfactory	Y
Smokey Hollow Subwatershed Site 3	IA02313	High	W	7/10/2018	Satisfactory	Y
Carson Dam	IA01870	Significant	C	11/4/2015	Unsatisfactory	NR
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	10/19/2015	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	10/14/2015	Satisfactory	NR
Bacon Creek Watershed Site H-3-1	IA02344	Significant	W	10/14/2015	Satisfactory	NR
Bacon Creek Watershed Site H-3-2	IA02345	Significant	W	10/14/2015	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	10/21/2015	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	10/7/2015	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	21	13
Miles of Levees	2	167	18
Levee Structures	6	57	46
Average Levee Age	49	55	53

*C = Cherokee I = Ida M = Monona P = Plymouth W = Woodbury + = Outside Region*

<i>County</i>	<i>Levee Name</i>	<i>Location</i>	<i>Risk Characteristics</i>			<i>Assessment Date</i>
			People	Structure	Property Value	
W	Floyd River FCP	Sioux City	-	-	-	-
W	Floyd River FCP	Sioux City	2332	204	\$616M	-
M,W	Little Sioux & Wolf Creek	Rodney	27	24	\$7.22M	-
W	Little Sioux LB - Bennet-Smithland	Smithland	0	0	0	6/23/2017
M,W	Little Sioux LB - Nagel DD North	Rodney	5	4	\$413K	-
M,W+	Little Sioux West Fork Ditch RB & Monona-Harrison Ditch RB - Intercountry	Whiting	426	189	\$175M	-
M,W	Little Sioux West Fork Ditch RB - Intercountry	Hornick	286	168	\$78.3M	-
M,W	Little Sioux Wolf Cr RB & W Fork LB - Intercountry	Hornick	25	26	\$9.46M	-
W	Sioux City - Big Sioux River LB	Sioux City	2262	906	\$179M	10/27/2016
W	Sioux City - Floyd River LB	Sioux City	2479	326	\$289M	-
W	Sioux City - Floyd River RB	Sioux City	2383	817	\$466M	10/27/2016
W	Sioux City - Perry Creek Left Bank	Sioux City	72	34	\$14.9M	7/31/2018
W	Sioux City - Perry Creek Right Bank	Sioux City	1553	488	\$254M	7/31/2018
M	Little Sioux - Intercountry DD	Whiting	10	2	\$420K	-
M+	Little Sioux - Intercountry DD	Turin	18	12	\$2.85M	-

M+	Little Sioux - Intercountry DD	Blencoe	1390	758	\$212M	-
M	Little Sioux LB & Beaver Creek LB - Intercountry	Turin	2	5	\$587K	10/26/2016
M	Little Sioux LB & Beaver Creek RB - Intercountry	Turin	7	15	\$2.29M	-
M	Little Sioux LB & Cottonwood Cr LB - Intercountry	Blencoe	5	11	\$1.03M	6/20/2017
M+	Little Sioux LB & Hogue Ditch LB - Intercountry	Little Sioux, Harrison County	547	313	\$28.4M	6/23/2017
M	Little Sioux LB & Maple River RB - Intercountry	Turin	88	65	\$6.28M	10/26/2016
M	Little Sioux LB - Castana - Intercountry	Castana	0	3	\$972K	6/23/2017
M	Little Sioux LB - Nagel and Intercountry DD	Turin	5	8	\$985K	6/23/2017
M	Little Sioux LB - Nagel DD South	Rodney	5	4	\$413	10/26/2016
M	Little Sioux Maple River RB North - Intercountry	Castana	2	0	\$917K	6/23/2017
M	Little Sioux Maple River RB South - Intercountry	Castana	0	3	\$259K	10/26/2016
M+	Little Sioux RB & Monona-Harrison LB - Intercountry	Blencoe	20	14	\$3.18M	-
M	Undefined	Whiting	not screened	-	-	-
M	Undefined	Whiting	not screened	-	-	-
I	Badger Creek Levee	Ida Grove	not screened	-	-	-
I	Badger Creek Levee 2	Ida Grove	not screened	-	-	-
I	Ida Grove - Maple River LB	Ida Grove	9	6	\$1.51M	12/19/2016
I	Ida Grove - Maple River RB	Ida Grove	not screened	-	-	-
I	Ida Grove - Odebolt Creek LB	Ida Grove	75	2	\$3.05M	11/9/2017
I	Ida Grove - Odebolt Creek RB & Maple LB	Ida Grove	450	110	\$59.1M	12/19/2016

<https://levees.sec.usace.army.mil/#/>

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 and longer periods of extreme cold) between fall of 2018 and spring of 2019 in Northwest Iowa reduced effectiveness of water retention systems across the region. Furthermore, increased occurrences of extreme weather

patterns prohibit effective repairs and stabilization even when funds are available to for such projects.

## 2. Drought

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](http://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, the State includes the following in reference to drought conditions in Iowa.

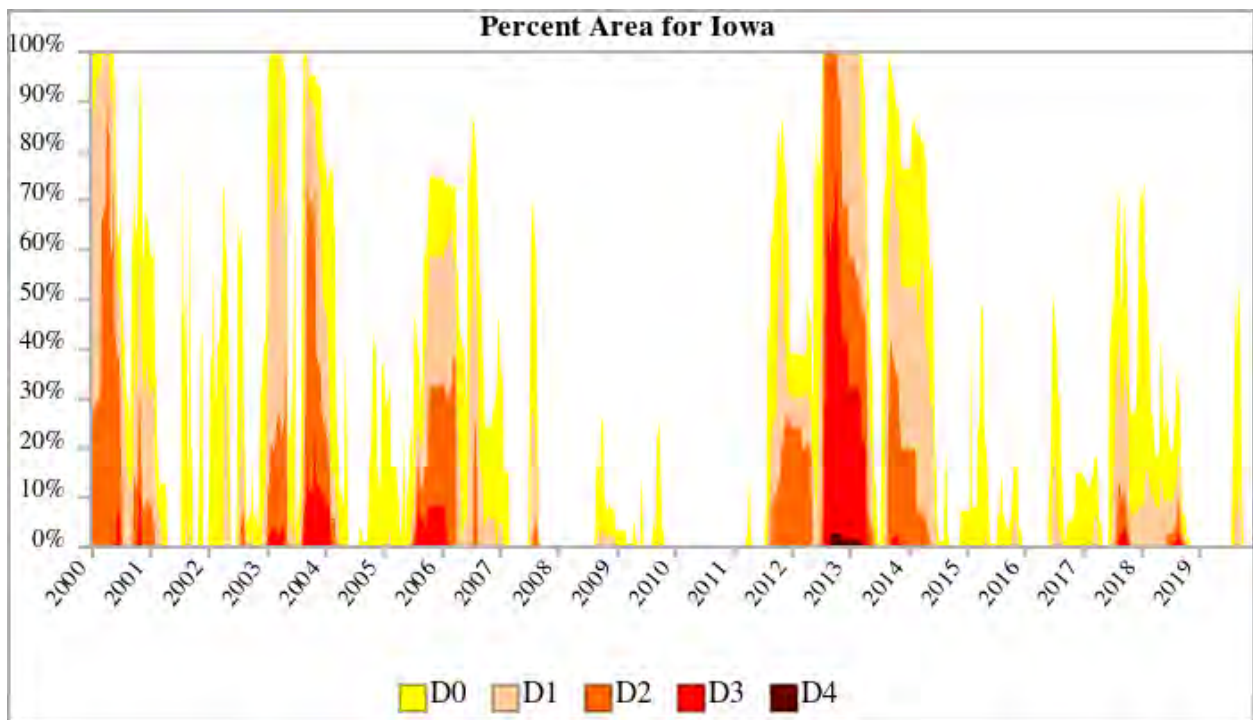
Four types of drought conditions are relevant to Iowa:

- 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 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 USDA records show ten (10) months of drought for the region beginning July 2012 through April 2013. The United States Drought Monitor indicates abnormally dry soil conditions for Monona County and a small portion of Cherokee County as of August 27, 2019. As of December 2019, no drought conditions exist in the state. From data beginning in 2000, the same source states the longest duration of drought (D1-D4) in Iowa lasted 151 weeks beginning on August 2, 2011 and ending on June 24, 2014 with the most intense period of drought occurring the week of September 25, 2012 where D4 affected 2.52% of Iowa land. <https://www.drought.gov/drought/states/iowa>. The following graph shows drought intensities in Iowa beginning 2000.



Source: U.S. Drought Monitor

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 2011. The Region experienced drought conditions beginning late summer of 2011, with intensified effects through June 2014. The onset of low precipitation-induced drought coincided with severe flooding conditions that lasted several months along the Missouri River, specifically impacting the region. High river water complicated consideration concurrent drought conditions. Furthermore, extreme and

prolonged drought in western portions of the United States may have overshadowed the effects of a similar weather pattern locally.

### 3. Earthquake

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; it sometimes triggers landslides, flash floods, and fires. The three (3) general classes of earthquakes are, tectonic, volcanic, and artificially produced.

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

Earthquakes with Epicenters in Iowa

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

There are no recorded earthquakes in the five counties included in this plan. As a result, goals and action items related to earthquake mitigation are not a priority. An ongoing concern does exist based on the potential of fracking-related earthquakes and seismic activity. According to Earthworks at [https://earthworks.org/issues/fracking\\_earthquakes/](https://earthworks.org/issues/fracking_earthquakes/), occurrences of hydraulic fracturing-related quakes is increasing in magnitude and frequency. While considering mitigation actions in regard to earthquakes, it is a logical step forward to consider, too the human-caused potential with more relevance. It is possible that earthquake events may increase in frequency as a result of fracking activities. Iowa does not have, nor is it expected to develop, fracking activity. However, nearby states including Nebraska and Kansas do allow this activity. Online resource *Inside Climate News* found at <https://insideclimatenews.org/news/20150120/map-fracking-boom-state-state> notes potential for fracking to begin in Illinois as well.

#### 4. Expansive Soils

Expansive soils are soils that 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 drama characteristic of others, such as floods or tornadoes, expansive soils account for approximately \$2.3 billion in damages annually in the United States.

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.

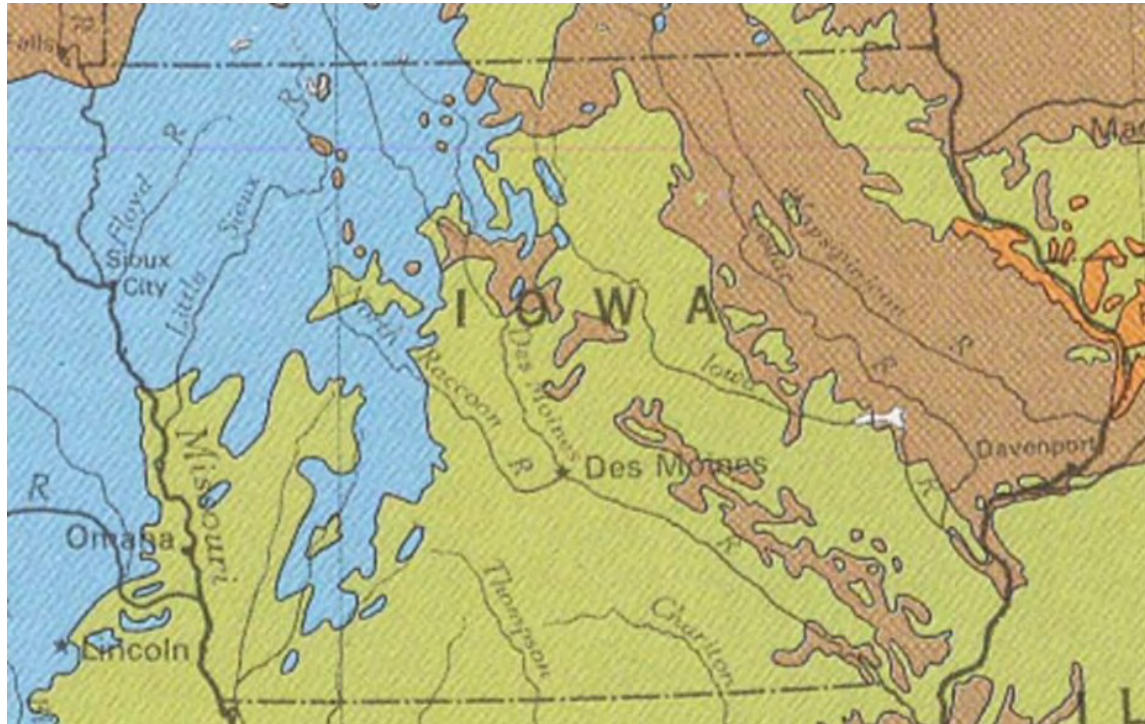
Soils and soft rock that tend to swell or shrink excessively due to changes in moisture content are commonly known as expansive soils. The effects of expansive soils are most prevalent in regions of moderate to high precipitation, where prolonged periods of drought are followed by long periods of rainfall. The hazard occurs in many parts of the southern, central, and western United States. Estimates conducted in 1980 put the annual damage from expansive soils as high as \$7 billion (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. The estimated damages also state that damages to single-family and commercial buildings accounted for nearly one-third of the total amount of damages. Expansive soils can also contribute to or cause damage to roadways, bridges, pipelines, and other infrastructure.

The availability of data on expansive soils varies greatly. In or near metropolitan areas and at dam sites, abundant information on the amount of clay generally is available. However, for large areas of the U.S., little information is reported other than field observations of the physical characteristics of clay.




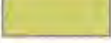


Probability and frequency analyses have not been prepared because of the nature of occurrence of this hazard. This is consistent with other geologic hazards that occur slowly over time. As such, the duration of response to expansive soils and their associated risk to public property and loss of life.

The SHMT evaluated the probability of future expansive soils events in Iowa at between 10% and 19% chance in the next year.





**COLOR-CODE EXPLANATION FOR SWELLING-CLAY MAP**

	Unit contains abundant clay having high swelling potential
	Part of unit, generally less than 50 percent, consists of clay having high swelling potential
	Unit contains abundant clay having slight to moderate swelling potential
	Part of unit, generally less than 50 percent, consists of clay having slight to moderate swelling potential
	Unit contains little or no swelling clay
	Data insufficient to indicate clay content of unit and (or) swelling potential of clay. Shown in westernmost States only

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](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 in blue indicating a high swelling potential. While there is no data pertaining to damages from expansive soils, the frequency of damages is associated with cycles of drought and heavy rainfall. These damages are 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 are damages visible, but invisible damages of underground utilities negatively affect the region.

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

## 5. Extreme Heat

Extreme heat events endanger the health and lives people, pets and livestock. Such events are responsible for an average of 182 deaths annually in the United States. Each of the five (5) counties within this plan have experienced at least one extreme heat event since 2009. Cherokee County and Ida County have eight (8) days of extreme heat on record in that period, and Plymouth County and Woodbury County have nine (9) in the same time frame. The summers of 2012 and 2016 were particularly challenging for the region, with multiple days of extreme heat recorded.

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. Traditionally, this is not an overwhelming concern as affected persons are generally acclimated to routine weather conditions. Several factors reduce effectiveness of acclimatization with presence of air conditioning in virtually all public facilities and increased occurrence of extreme conditions for longer periods having the most influence.

In addition to human health impacts, extreme heat can affect agriculture by decreasing crop yields. 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.

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. This includes temperatures (including heat index) in excess of 100 degrees Fahrenheit for at least three (3) successive days of 90+ degrees Fahrenheit. 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. The National Weather Service can issue a Heat Advisory or Excessive Heat Warning.

- Heat Advisory – A heat index of 100°F or higher is expected for a period of 3 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 "around 75°F". A heat advisory can be issued for a heat index less than 100°F when the cumulative effect of successive days of near advisory heat leads to potentially life threatening conditions.
- Excessive Heat Warning – A heat index of 105°F or higher is expected for a period of 3 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 "around 75°F". An excessive heat warning can be issued for a heat index less than 105°F when the cumulative effect of successive days of near warning heat leads to life threatening conditions.

Extreme heat can impose stress on humans and animals. Heatstroke, sunstroke, cramps, exhaustion, and fatigue are possible with prolonged exposure and/or physical activity due to the body's inability to dissipate the heat. Urban areas are particularly at risk because of air stagnation and large quantities of heat absorbing materials such as streets and buildings. Extreme heat can also result

in distortion and failure of structures and surfaces such as roadways and railroad tracks.

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 extreme heat events in the region.

Record of Extreme Heat Events in Each County				
Cherokee	Ida	Monona	Plymouth	Woodbury
07/15/2011	07/15/2011	07/16/2011	07/15/2011	07/15/2011
06/27/2012	06/27/2012		06/27/2012	06/27/2012
07/02/2012	07/02/2012		07/02/2012	07/02/2012
07/15/2012	07/15/2012		07/15/2012	07/15/2012
7/21/2012	07/21/2012		07/18/2012	07/18/2012
06/10/2016	6/10/2016		08/01/2012	08/01/2012
07/20/2016	7/20/2016		06/10/2016	06/10/2016
06/29/2019	6/29/2019		07/20/2016	07/20/2016
			06/29/2019	06/29/2019

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 scientist in the working in the state of Iowa.

## 6. Flooding – Flash and Riverine

Communities that have 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

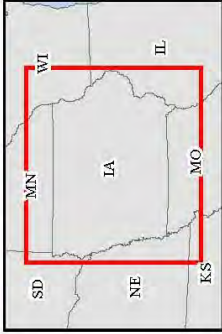
delaying local closure declaration. As referenced throughout this Plan, unique combinations of weather-related phenomena cannot be prevented, neither have they been given serious consideration in planning response activity. However, the new normal is expecting the extreme.

The Region has had nearly decade of varying flooding events. In 2011, the prolonged flooding of the Missouri River triggered flooding events on 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.

Reference is made in the State Plan to the Flood Risk Maps on the Iowa DNR website. Unfortunately, all five counties represented in this region are still in the draft stage so the statewide depiction is not inclusive of 500- or 100-year floodplains impacting the decisions as laid out in this plan. Draft Flood Hazard Product maps can be found on the Iowa DNR site at <http://ifis.iowafloodcenter.org/ifis/newmaps/hazard/>. As cited in the State Plan, the NCEI Storm Events Database shows occurrence of 35 or more flood events in each of Cherokee, Plymouth, and Woodbury counties from 1996 to 2017, and 1-10 events for Ida and Monona counties. For a snapshot reference to significance of flooding in the region, a query of flood, flash flood, heavy rain, heavy snow events between March 13, 2019 and July 17, 2019, 44 events



# FEMA-4421-DR, Iowa Disaster Declaration as of 07/18/2019



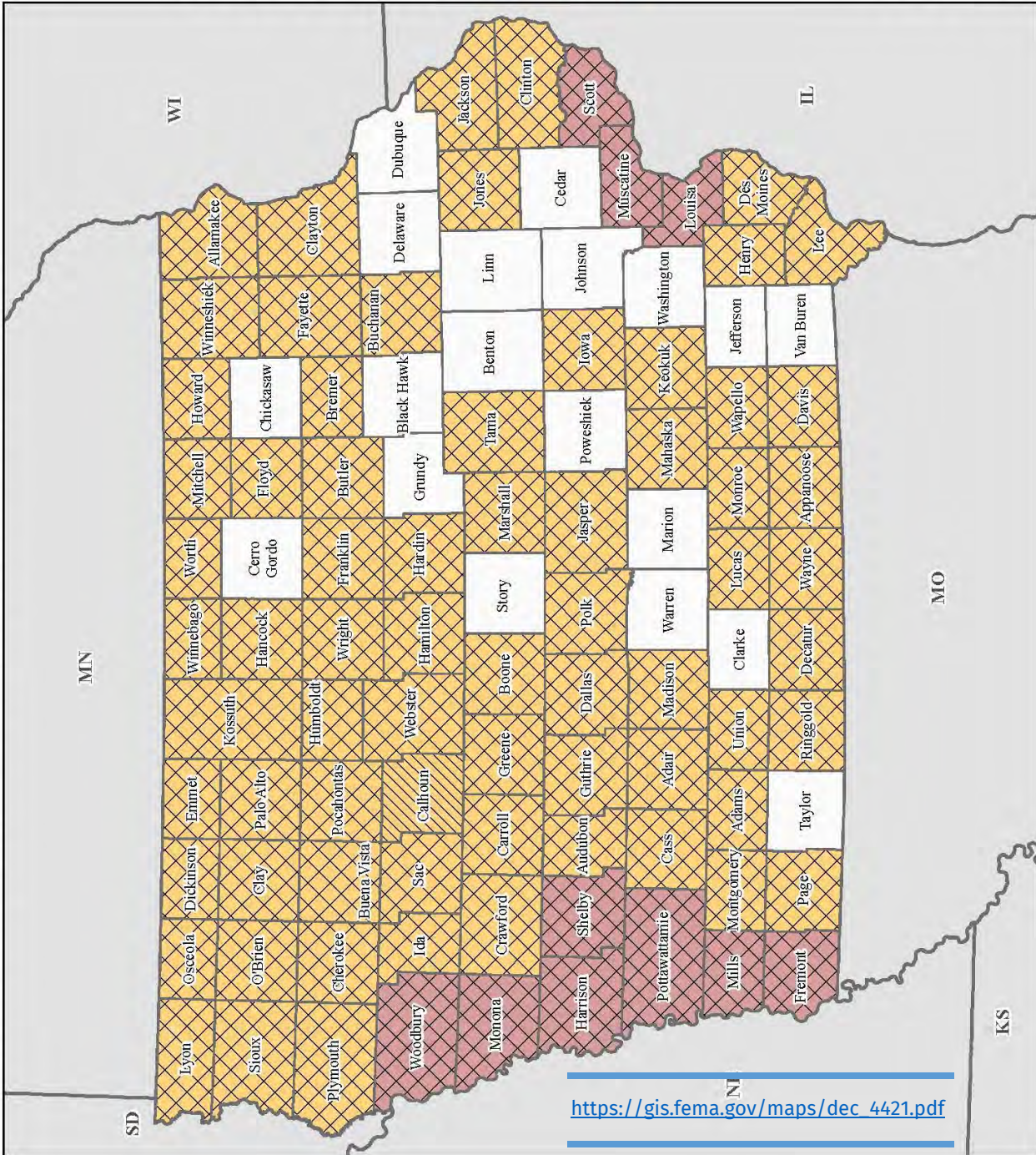
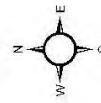
### Data Layer/Map Description:

The types of assistance that have been designated for selected areas in the State of Iowa.

All areas in the State of Iowa are eligible to apply for assistance under the Hazard Mitigation Grant Program.

### Designated Counties

- No Designation
- Public Assistance (Categories A and B)
- Individual Assistance and Public Assistance (Categories A - G)
- Public Assistance (Categories A - G)



[https://gis.fema.gov/maps/dec\\_4421.pdf](https://gis.fema.gov/maps/dec_4421.pdf)

### Data Sources:

FEMA, ESRI;  
 Initial Declaration: 03/23/2019  
 Disaster Federal Registry Notice:  
 Amendment #14: 07/18/2019  
 Datum: North American 1983  
 Projection: Lambert Conformal Conic

show as reported in the region with cumulative damages costing over \$5.7m for only three impacted areas (Sioux City, Mapleton, and Lawton/Moville). Due to local coverage of March events and several more through the year, it is known that this is not a total accounting of damages or affected damages resulting from March incidents. As of submission of this Plan, damages are still being assessed in many communities and are discussed within applicable jurisdiction risk analyses. Further details on flood and flash flood vents can be found on the NOAA website at <https://www.ncdc.noaa.gov/stormevents/>. FEMA data outlines the Presidential Disaster Declaration for Iowa from March 12, 2019 through June 15, 2019. All five counties represented in this plan were included for Public Assistance Categories A through G, while Monona and Woodbury were also eligible for Individual Assistance (Categories A-G). The following totals are applicable for all eligible counties in Iowa.

Individual Assistance Applications Approved:	1,735
Total Individual & Households Program Dollars Approved:	\$ 15,080,755.01
Total Public Assistance Grants Dollars Obligated:	\$ 14,824,056.97

## 7. Grass or Wildland Fire

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.

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. There is 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 structures and people are at risk.

The following is the description of grass fire and wildfire as presented in the State Plan.

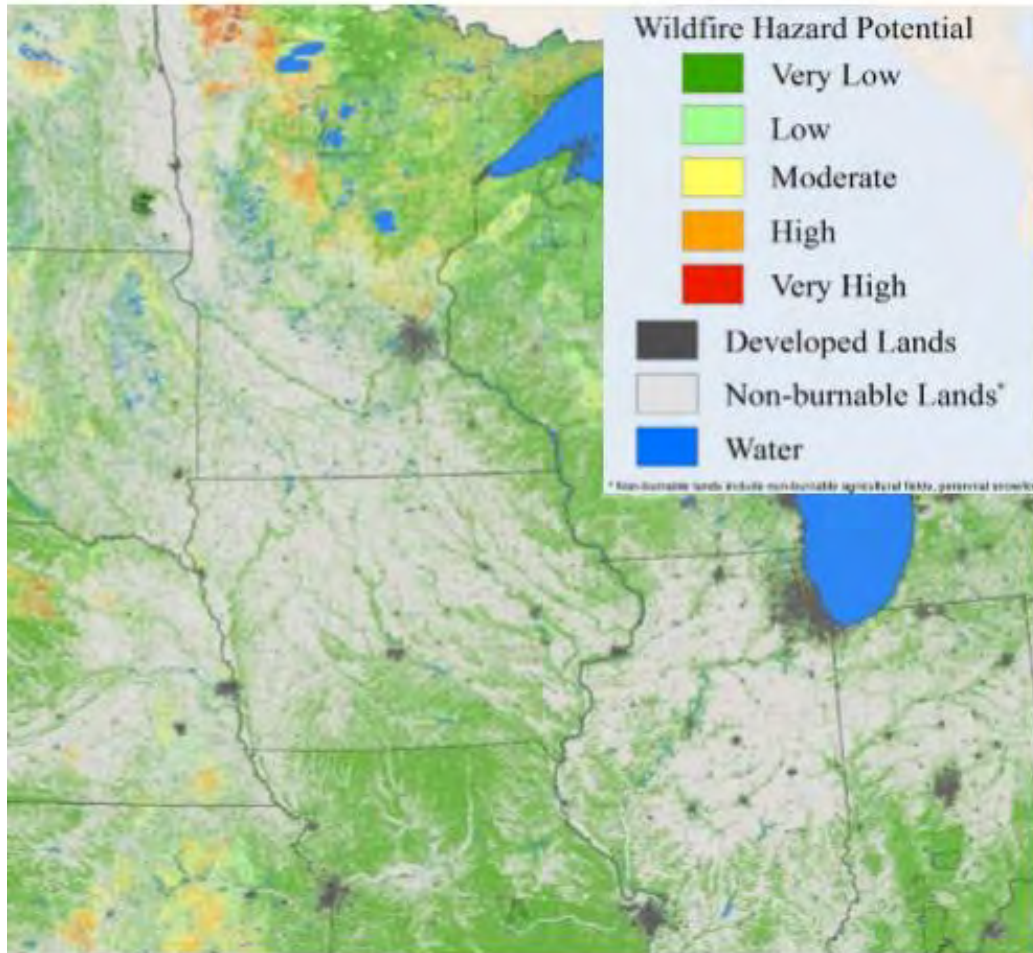
A grass fire or wildland fire is an uncontrolled fire that threatens life and property in a rural or wooded area. A grass fire or wildland fire is not a cropland fire. Damage to crops from fire are often covered by insurance, and are on land that is not “wild.” Wildland or grass fires occur in natural, 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 2,438 wildfires spanning 69,583 acres from 2013 to 2017 in Iowa. Peak years were during and after the drought experienced in 2012-2013. While this may seem like a large number of fires, when compared to other states, it is very small. As an example of how the state ranks versus other states, Iowa ranked 44th in number of wildfires for the decade from 2002 to 2012, and 40th in number of acres burned.

The USDA Forest Service (USDA) provides information regarding wildfire hazard potential (WHP) in the conterminous United States, which can be found using the link below. Additionally, the map below is provided by the USDA Fire Modeling Institute zoomed into the state of Iowa (*Wildfire Hazard Potential, 2014*; Source: USDA Forest Service, Fire Modeling Institute, <https://www.firelab.org/document/classified-2014-whp-gis-data-and-maps>).

Iowa and Illinois have the smallest percentage of wild land in all of the United States. Consequently, there is simply less opportunity for wildfires in Iowa than most any other state. The only area in the entire state with even a “Moderate” wildfire hazard potential is along the western edge of Plymouth County, and in the very northwest corner of Woodbury County. The most vulnerable area would be the northwest corner of Woodbury County, because in that area wildland and urban development interface intermix.



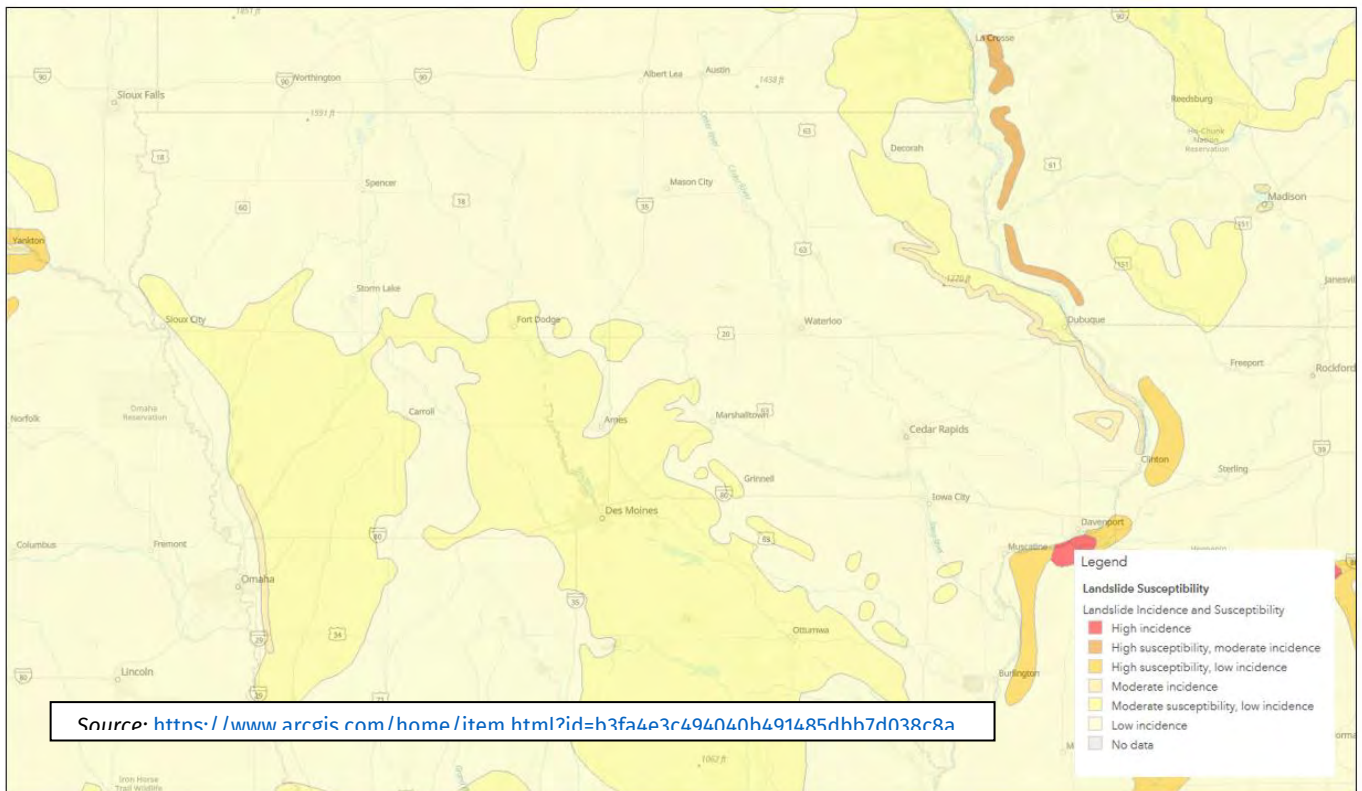


The above image and more information regarding wildfires in Iowa can be found the NOAA website at <https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=19%2CIOWA> including individual county data.

There are no recorded wildfires in the five counties included in this plan from January 2013 to October 2019. As a result, goals and action items specific to wildfire mitigation are not a priority. It is possible that 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 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 likely be lower due to close proximity to firefighting services.

## 8. Landslide

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.

There have been no reported landslide events in Iowa resulting in injury or death. The geographic extent of the documented historic events has been limited to less than a city block in size and has “run-out” over the stretch of less than 100 yards. However, as no State agency documents historical data on landslides in Iowa, there may be undocumented past events that were larger.

A portion of the state is moderately susceptible to landslides. In northeastern Iowa, along the Silurian Escarpment, you can find blocks of dolomite slumped onto the underlying Maquoketa shale. In the hilly terrain of central Iowa, areas of Pennsylvanian shale are susceptible to slides where it is overlain by loess or till. 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 locations of areas more susceptible than others are mapped (see map below), the likelihood or probability of landslides is not well understood in Iowa. As mentioned above, no State agency tracks landslide events, so it is not possible to calculate a rate of occurrence per year for the past. So, past events cannot be used to estimate probability of future events, and we do not currently have any other method to calculate probability.

More information regarding landslides and the following image can be found on the USGS website <https://www.arcgis.com/home/item.html?id=b3fa4e3c494040b491485dbb7d038c8a>.

The USGS provides an interactive Landslide Susceptibility map 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 (April 24, 2007). 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

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. In the NOAA database of Storm Events (<https://www.ncdc.noaa.gov/stormevents/>), there are 13 events reported between November 16, 2018 and February 23, 2019 including Winter Weather, Winter Storm, Cold/Wind Chill, and Blizzard in our region. For the period beginning December 1, 2013 through April 18, 2018, 202 winter weather-related events were reported. In addition to the previously provided categories, reports included Extreme Cold/Wind Chill, Heavy Snow, and Ice Storm events). 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.

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. Most freezing rain events are short-lived and occur near sunrise between the months of December and March.
- **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.

- Freezing Rain – Caused by rain falling on surfaces with a temperature below freezing. The rain freezes upon contact with the ground. Large build-ups of ice can down trees and power lines and coat roads.
- Wind Chill – The apparent temperature the body feels when wind is factored into the equation.

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 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

Historically, sinkholes have not been a serious concern for the region. Most sinkholes result from human activities such as underground mining of coal, groundwater or petroleum withdraw, and drainage of organic soils. The region is not necessarily prone to sinkholes resulting from such activity.

According to the Iowa Geological Survey, most of Iowa's sinkholes occur in rural areas where their main impact is rendering affected land unsuitable for row-crop agriculture. Sinkholes have also 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, most sinkholes occur in the eastern part of Iowa 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. The Iowa Geological Survey (IGS) provides this description of karst:

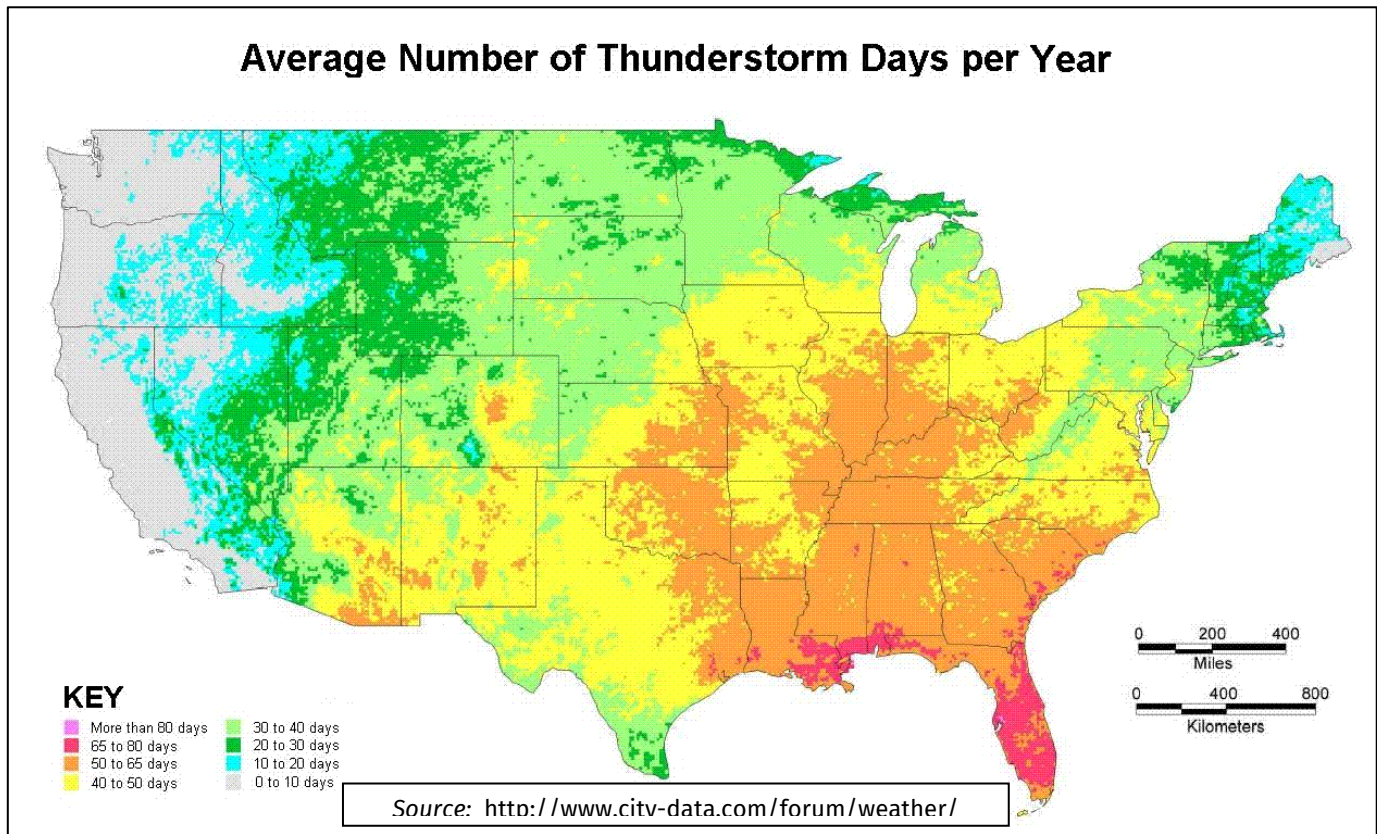
Karst refers to geologic, hydrologic, and landscape features associated with the dissolution of soluble rocks, such as carbonates and evaporites. . . . [S]inkholes . . . form when the land surface collapses into subsurface voids formed in the slowly dissolving rock.

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

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 NOAA Storm Events database (<https://www.ncdc.noaa.gov/stormevents/>) shows 125 hail events and 86 thunderstorm wind events reported in the region between July 1, 2013 and August 31, 2019. Damages costs associated with reported events totals \$370,000 incurred during 10 of those reported events. No lightning events were reported, however residents are able to attest that lightning is a frequent occurrence during most, if not all thunderstorm activity. Assets in the region are vulnerable to lightning include 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.

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

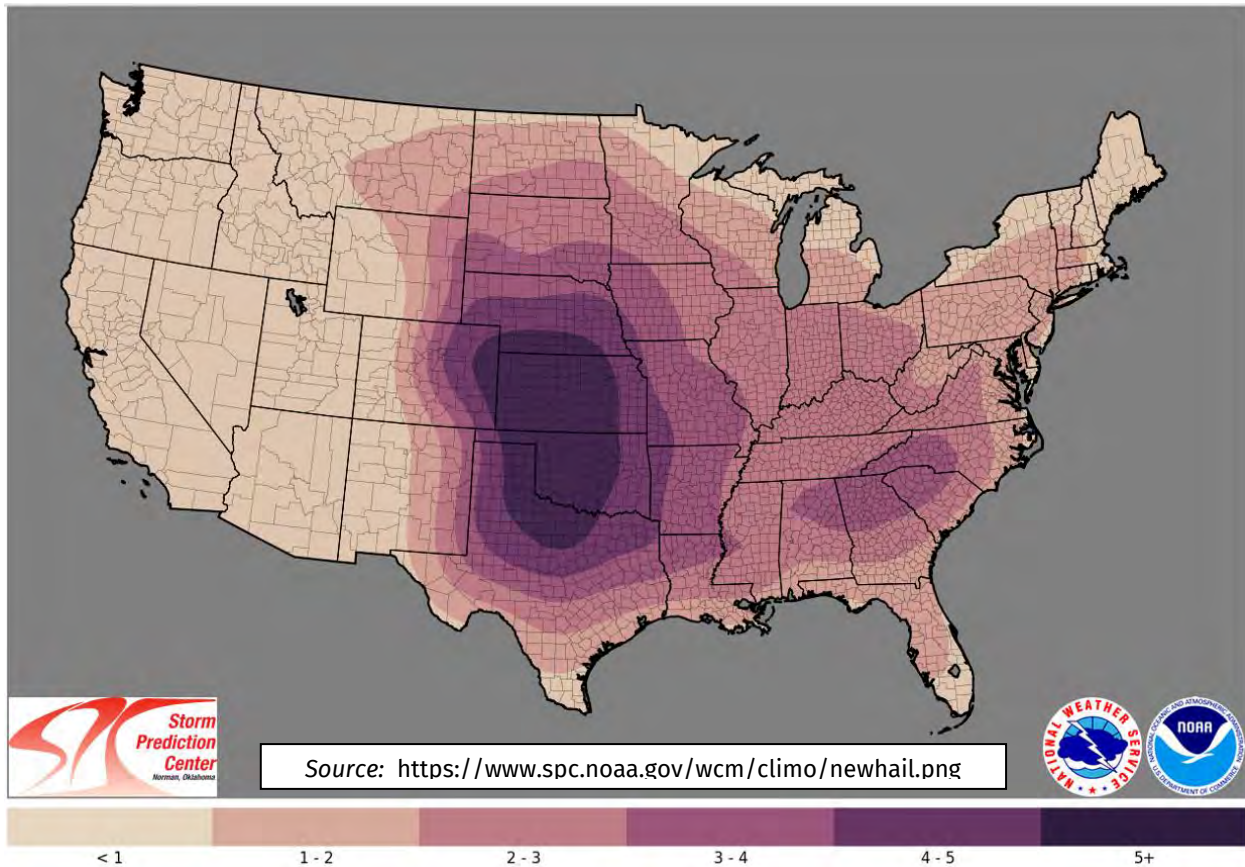
Thunderstorms are common in Iowa and can occur singly, in clusters, or in lines. Thunderstorms can result in heavy rains, high winds (reaching or exceeding 58 mph), tornadoes, or hail. For the purposes of this hazard analysis and risk assessment, the thunderstorm effect of flooding due to rain is primarily 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



Mean Number of Hail (1 Inch Diameter or Larger), United States 1986-2015

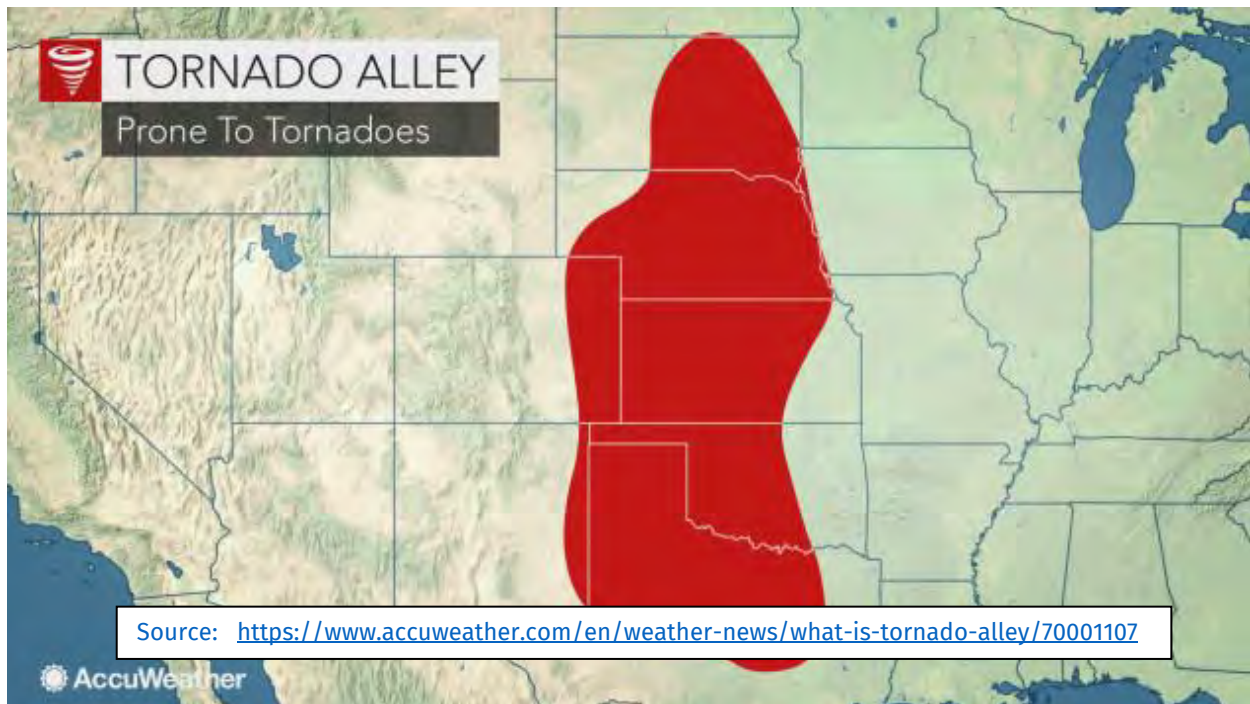


The figures above show the distribution and frequency of thunderstorms in the US, and the mean number of based on 1" diameter or larger. The majority of Iowa has an average of 40-50 days with thunderstorms per year, while the region experiences 3 to 4 inches of hail per year.

## 12. Tornado Windstorm

Bordering, sometimes overlapping, the eastern-most edge of the area commonly known as "Tornado Alley", the region's proximity indicates a very high susceptibility to tornado. While there is not a universal acceptance of Tornado Alley boundaries, the western boundary of the state is typically included in discussion regarding such. AccuWeather provides this map to depict the areas included in their interpretation of Tornado Alley.

Many depictions include a much larger portion of Iowa. “Dixie Alley” is a secondary tornado



alley, with typically less severe implications. However, as weather patterns shift, the two regions are coming closer together in both definition and frequency. An article from USA Today online reports an average of \$5.4 billion in damages each year, with \$10b events “no longer uncommon” (<https://www.usatoday.com/story/weather/2018/10/17/tornado-alley-shifting-east/1660803002/>).

NOAA Storm database shows 15 Tornado and 21 High Wind events reported in the region between July 1, 2013 and August 31, 2019, accounting for \$2,441,000 in damages. Of the 15, eleven 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.

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, 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.

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.

#### 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.

### 13. Animal/Plant/Crop Disease

While some outbreaks are inevitable, the region does need to concern itself with the escalating outbreaks or a new infestations and pathogens. In 2018, bovine tuberculosis has been found in multiple cattle herds throughout Northwest Iowa. 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 the Johnes Disease. The Mycopar vaccine currently used to control this disease will be discontinued towards the end of 2019.

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 wide spread economic and societal implications for our state, the nation, and potentially the world. Response and recovery to 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 have been declining which provides less crop ventilation and more heat stress for plants and animals. In addition reduced winds 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. Other crop diseases and pests (such as Soybean Asian rust) that have not been observed in Iowa as of yet, but if warmer winters persist 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; 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.

<b>County</b>	<b>Cherokee (Chke)</b>	<b>Ida</b>	<b>Monona (Mon)</b>	<b>Plymouth (Ply)</b>	<b>Woodbury (Wdby)</b>
Acres of farmland	338,678	263,097	333,858	503,438	450,763
Market value of products sold	\$387,127,000	\$222,788,000	\$192,626,000	\$738,200,000	\$368,758,000

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

<ul style="list-style-type: none"> <li>• Goats</li> </ul>	
<i>Wdby Add'l Top Livestock Inventory</i>	<i>Wdby Add'l Top Crop</i>
<ul style="list-style-type: none"> <li>• Layers</li> <li>• Goats</li> </ul>	<ul style="list-style-type: none"> <li>• Popcorn</li> </ul>

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.

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

- 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

In addition to those listed above, the Emerald Ash Borer is also being monitored by the state of Iowa. This pest is under federal quarantine. Several communities with varying levels of commitment are addressing the pending infestation of this pest. Specific measures are included for discussion within applicable jurisdiction profiles.

#### 14. Hazardous Materials Incident

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/hazardousspills/Introductory.aspx>, the Iowa DNR Hazardous Material Release Database shows 195 hazardous materials incidents in the region between July 1, 2013 and November 26, 2019 averaging more than 2.5 incidents per month in that 6½-year span. 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

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. One potential cause of infrastructure failure is space weather/solar flare.”

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 promotion of standardized and specialized building codes is a common discussion regarding local mitigation efforts. Complications with regulation is lack of funding to enforce such measures.

## 16. Pandemic Human Disease

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 mosquitos 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 from and recovery to 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.

Records from Siouxland District Health in Woodbury County show the following statistics for reportable illnesses in Woodbury County in 2019 and 2018. Information shown as provided (<http://www.sioxlanddistricthealth.org/servicesclinics/laboratory/disease-tracker.html>).

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.

**2019**

DATE: 1/1/2019 thru 12/2/2019

\*ALL CASES ARE EITHER CONFIRMED OR PROBABLE CASES

<b>Reportable Diseases in Woodbury County</b>	<b>Number of Cases</b>
Brucellosis	1
Campylobacter	16
Cryptosporidium*	25
E. coli / Shiga toxin**	12
Giardia	18
Hepatitis B (acute)	1
Hepatitis B (chronic)*	13
Lyme Disease	1
Pertussis	2
Salmonella**	25
Shigella	3
West Nile Virus*	<u>2</u>
<b>Total</b>	<b><u>119</u></b>

\* 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.

**2018**

Campylobacter	28
Cryptosporidium*	27
Cyclospora	4
E.coli/Shig Toxin**	10
Giardia	6
Hepatitis B (Chronic)*	18
Lyme Disease*	1
Malaria	2

Pertussis**	1
Salmonella**	28
Shigella**	0
West Nile Virus	<u>8</u>
<b>Total</b>	<b><u>134</u></b>

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) @ [wwwn.cdc.gov/nndss/conditions/search/](http://wwwn.cdc.gov/nndss/conditions/search/) as found on the CDC website. An infographic on the process of surveillance can be found @ [https://wwwn.cdc.gov/nndss/document/NNDSS\\_Infographic.pdf](https://wwwn.cdc.gov/nndss/document/NNDSS_Infographic.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.

## 17. Radiological Incident

Radiological incidents are not a marked concern for 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://www.beready.iowa.gov/be\\_aware/nuclear\\_plants.html](https://www.beready.iowa.gov/be_aware/nuclear_plants.html)) 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:

- **Notification of Unusual 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 Emergency** 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.
- **General 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 Emergency Information for Farmers, Food Processors and Distributors* can be found at the above provided link.

## 18. Terrorism

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 have enhanced security procedures including installation of warning and surveillance systems, controlled access to facilities, and unspecified measures for protection. Unfortunately, measures against human acts of evil can be taken only so far before those being protected become imprisoned a different way. 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

According to Iowa DOT statistics on vehicle registrations, a total of 3,708,877 vehicles were registered in Iowa in 2018, down considerably from 4,462,656 in 2017 and preceding years with 4,408,540 in 2016, 4,341,801 in 2015, and 4,282,200 in 2014. 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 2018 for the region is 234,738 with per county numbers as provided below.

Cherokee	21,858	Plymouth	46,266
Ida	13,822	Woodbury	135,571
Monona	17,221		

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 116 fatalities in the region and 19,104 total crashes from 2014 through 2019 (*data pulled 12/27/2019 14:23*). A full

scope of vehicle accidents and incidents on state roadways can be found on the Iowa DOT website @ <https://iowadot.gov/mvd/factsandstats>. 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 on train/vehicle and pedestrian incidents are becoming more prevalent with social media presence. Additional mitigation by way of vehicle safety and driving safety is available through social media campaigns through the FTA, NHTSA, and state and local transportation authorities. Again, awareness is key in preventing traffic incidents and 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 Change

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 what is commonly known as Climate Change. Key impacts and related characteristics as identified by the now inactive Iowa Climate Change Impact Committee in its 2010 report to the Governor are shown below.

#### *Increased Precipitation*

- Increased frequency of precipitation extremes that lead to flooding.
- Increase of 8 percent more precipitation from 1873 to 2008. A larger increase in precipitation in eastern Iowa than in western Iowa.
- A larger increase in precipitation in eastern Iowa than in western Iowa.

#### *Higher Temperatures*

- Long-term winter temperatures have increased six times more than summer temperatures.
- Nighttime temperatures have increased more than daytime temperatures since 1970.
- Iowa's humidity has risen substantially, especially in summer, which now has 13 percent more atmospheric moisture than 35 years ago as indicated by a 3 - 5 degree F rise in dew-point temperature. This fuels convective thunderstorms that provide more summer precipitation.

#### *Agricultural Challenges*

- Climate extremes, not averages, have the greater impact on crop and livestock productivity.
- Increased soil erosion and water runoff.
- Increased challenges associated with manure applications.
- Favorable conditions for survival and spread of many unwanted pests and pathogens.

#### *Habitat Changes*

- Plants are leafing out and flowering sooner.
- Birds are arriving earlier in the spring.

- Particular animals are now being sighted farther north than in the past.

#### *Public Health Effects*

- Increases in heart and lung programs from increasing air pollutants of ozone and fine particles enhanced by higher temperatures.
- Increases in infectious diseases transmitted by insects that require a warmer, wetter climate.
- An increase prevalence of asthma and allergies.

Additional information about continued and anticipated effects of climate change to Iowa can be found online at <https://www.iowadnr.gov/Conservation/Climate-Change> (*Climate Change Impacts on Iowa 2010 - Executive Summary*; *Climate Change Impacts on Iowa 2010 - Complete Report* – links embedded and available at provided url).





### III. Region

#### A. Profile

##### *Weather & Climate*

The climate for the Region is characterized by a variety of temperatures and weather patterns throughout the year, but is mostly consistent between counties. Averages as provided are based on recorded averages per county.

- High temp for July                    84°F
- Low temp for January                8.8°F
- Days of sunshine                    208
- Days of precipitation                91
  - rainfall                    31.3"
  - snowfall                34.1"

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.

##### *Population*

Combined population for the region based on 2010 Census data is 155,562 persons with nearly 16% of that population living in rural or unincorporated areas. Presence of vulnerable populations varies slightly by county. Region breakdown is provided in the following table.

<b><i>Vulnerable Populations</i></b>	<b><i>Total</i></b>	<b><i>Percent</i></b>	<b><i>Iowa</i></b>
5 years and younger	10,541	6.78%	6.30%
65 years and older	24,904	16.01%	16.00%
Below the poverty level	20,029	12.88%	12.00%
Living with a disability	19,305	12.41%	11.60%

## B. Participation

Elements of this Regional Plan were drawn from 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 conducted by the project coordinator do not include the coordinator in attendee counts.

<i>Date</i>	<i>Meeting purpose</i>	<i>Location</i>	<i># signed in</i>
01/30/19	Region Planning Team meeting	SIMPCO	8
02/25/19	Draft Flood Hazard Product Review Mtg - Monona Co	Onawa	15
03/20/19	SIMPCO Water Resource Committee meeting	SIMPCO	5
04/24/19	SIMPCO Water Resource Committee meeting	SIMPCO	9
06/25/19	Floodplain Management Workshop	Correctionville	9
08/28/19	Region Planning Team meeting	WITCC	6
09/18/19	Draft Flood Hazard Product Review Mtg - Plymouth Co	Le Mars	18
10/16/19	SIMPCO Water Resource Committee meeting	SIMPCO	7
10/23/19	Region Planning Team meeting	WITCC	5
11/20/19	SIMPCO Water Resource Committee meeting	SIMPCO	7

The Regional Planning team met in person as indicated and communicated information via email throughout the entire plan development process. Draft Flood Hazard Product Review meetings were conducted by DNR staff and attended by representatives from communities within each county as well as neighboring counties. Discussion about current floodplain designations, changes due to technological advances, and intentional elevation projects are pertinent to community conversations while determining projects and the feasibility of the same. SIMPCO's Water Resource Committee meets periodically, as often as monthly when conditions deem 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. The Floodplain Management Workshop, also conducted by

representatives from the DNR, included project procedures, examples, and considerations for communities dealing with flooding issues – flash, riverine, annual and/or historical.

### C. Capabilities & Resources

Preparation of this Plan includes an extensive review of available resources available within the planning region in addition to local, State, and Federal databases. It is the goal of this plan to not only identify available resources, but to provide direction on maximizing use of them in order to significantly reduce the impacts of naturally occurring and other hazards. Regional resources vary greatly on accessibility, effectiveness, cost, and timeliness. Established communications systems are vital to communities concerning growth and development opportunities and local legislative action as well as emergency preparedness and awareness.

Regardless of the medium, it is essential for communities to identify and target their residents' preferred means of communications. Traditional media resources such as print newspapers and local television and radio news stations remain as a constant in communicating with residents. Print news availability varies by community from an occasional newsletter to a daily printed newspaper that covers the Siouxland Region as a whole. While widely dispersed, the printed news format still has a limited reach. Some communities send correspondence as needed with monthly utility bill mailing. This is effective for widespread communication of upcoming events but not as helpful for urgent and immediate notifications. Communities without a strong internet or social media presence may opt for door-to-door flyers or loudspeaker announcements in conjunction with the local fire departments or law enforcement offices. Through development of this Plan, communities have been strongly encouraged to promote and make use of technology to the utmost of their ability. Lack of thriving cellular and broadband networks in several rural areas does limit how residents benefit from technology. Addressing gaps in technology is a key concern among communities and some have opted to include this as an identified action in addressing natural hazard mitigation.

Where barriers to technology are minimal, e-alerts are perhaps the most effective means of enabling awareness. Highly promoted in some counties and lesser in others, *Alert Iowa* is a notification system available to all counties in the Region under this Plan. *Alert Iowa* is a mass communication network used in the event of a disaster or other emergency situation. Alerts

originate through state and local authorities and is available free of charge. Each participating County hosts a registration link on their County website. Subscribers may receive alerts for more than one county. Alerts vary in detail depending on available information and often include instruction on what to do and/or where to find more information. Wireless Emergency Alerts are a separate notification system that sends brief, concise messages to WEA-capable mobile devices. This is typically a standard feature of cellular service providers. Customers either allow or block these alerts while setting up a new phone. Three types of alerts are issued through this service – Presidential (for a national emergency), Imminent Threat (human-caused and natural disaster events specific to subscription area), and Amber (abducted child notifications).

Another key communication system implemented in each community is the warning siren. Most jurisdictions report that sirens are sounded through respective county communications centers. Some can sound the sirens locally directly, and some can call to the Com Center for activation. Testing and effectiveness of sirens varies by community. Some jurisdiction have included an additional or replacement siren among scheduled mitigation actions. A couple communities indicated that their sirens have a public address capacity connected to their sirens so verbal information and/or instruction can accompany siren alerts. In addition to sudden onset of an event, such as a tornado, some challenges in complete reliance on siren warnings include aging equipment, irregular testing schedules resulting in confusion over real-time alert versus test cycle, and high wind velocity affecting audibility. Some of those concerns are specified within the context of affected jurisdiction analysis.

Resources beyond emergency and urgent communications include community support agents and organizations. At the Federal, State, and local levels, both formal and informal community-based programs play a role in preparedness, response, and recovery. As exemplified in the 2019 flooding disasters in our region, a number of such agencies proactively reached out to affected communities, thereby further expanding each community's awareness of resources. Organizational support evident, for example, in the flooding and subsequent evacuation and recovery process of the City of Hornick included an extensive network. The Mayor, all City staff and Councilmembers, County Sheriff's Department, Emergency Management Agency and Secondary Roads, local emergency response teams, Salvation Army, Iowa Departments of Homeland Security, Public Health, Transportation and Natural Resources, Siouxland District Health Department, SIMPCO, Iowa Small Business Administration, FEMA,

Sloan Savings Bank, Community Action Agency, local churches and schools, nearby municipalities, and others actively participated in recovery and loss prevention efforts. While it is invaluable to have these resource representatives step forward visibly in crisis, it is imperative for communities to be aware of all resources when significant events are smaller in scale but equally devastating to individuals. Resources as identified by each jurisdiction are included in community profiles.

<b>State and Federal Resources</b>	
Stream Maintenance Program	Iowa Department of Natural Resources
Engineering Studies for Streams	
Floodplain Development Management	
State Planning Agencies	ICOG
	Iowa League of Cities
<b>Regional Resources (including Membership-Based Services)</b>	
Economic Development Plan	SIMPCO Comprehensive Economic Development Strategy (CEDS)
Transportation Plan	2045 Siouxland Regional Transportation Planning Association Long Range Transportation Plan
Regional Planning Agencies, Committees, & Groups	SIMPCO
	Region IV Hazardous Materials Response Commission
	Region IV LEPC
2020 Regional Hazard Mitigation Plan	
<b>Uniform County Resources</b>	
Emergency Management Agency & Programming	Emergency Management Coordinator
	County Recovery Plan
	County Emergency Plan
<b>Funding Abilities</b>	
CDBG	County Specific Funding Opportunities: <ul style="list-style-type: none"> <li>• Cherokee County Legacy Foundation</li> <li>• Ida County Community Betterment Foundation</li> <li>• Monona County Community Partners Foundation</li> <li>• The Community Foundation of Greater Plymouth County</li> <li>• Missouri River Historical Development Grants (Wdby Co)</li> </ul>
HMEP	
SRF	
TAP	
USDA	
Firefighters Support Foundation	
Gilchrist	

<i>CID</i>	<i>Community Name</i>	<i>Init FHBM Identified</i>	<i>Init FIRM Identified</i>	<i>Curr Eff Map Date</i>	<i>Sanction Date</i>	<i>Tribal</i>
<b>Cherokee County</b>						
190549	AURELIA	4/16/1976	7/1/1987	07/01/87(L)	7/1/1987	No
190854	CHEROKEE COUNTY *	5/6/1977	5/1/2011	05/01/11(L)	5/1/2011	No
190063#	CHEROKEE, CITY OF	3/29/1974	1/2/1981	1/2/1981	1/2/1981	No
190354	QUIMBY	-	-	-	06/29/15(E)	No
190064	WASHTA	8/30/1974	9/27/1985	09/27/85(M)	9/27/1985	No
<b>Ida County</b>						
190696	ARTHUR	6/25/1976	9/1/1987	09/01/87(L)	9/1/1987	No
190423#	BATTLE CREEK	9/26/1975	2/8/1999	2/8/1999	2/9/1999	No
190424	GALVA	9/19/1975	8/19/1986	08/19/86(M)	8/19/1986	No
190156#	IDA GROVE	1/23/1974	9/5/1979	9/5/1979	9/5/1979	No
<b>Monona County</b>						
190208#	MAPLETON	12/28/1974	9/27/1985	05/02/02(M)	9/27/1985	No
190893#	MONONA COUNTY *	-	5/2/2002	5/2/2002	5/19/2003	No
190783#	MOORHEAD	9/19/1975	5/2/2002	05/02/02(M)	4/17/1987	No
190463#	ONAWA	-	5/2/2002	5/2/2002	8/31/2010	No
190921#	RODNEY	7/4/1978	5/2/2002	05/02/02(M)	6/10/1980	No
190805#	SOLDIER	8/13/1976	5/2/2002	5/2/2002	2/28/2012	No
190951#	TURIN	-	5/2/2002	5/2/2002	3/16/2011	No
190684#	WHITING	7/2/1976	1/1/1987	5/2/2002	1/1/1987	No
<b>Plymouth County</b>						
190223#	AKRON	3/22/1974	8/1/1986	6/6/2001	8/1/1986	No
190476	BRUNSVILLE	7/2/1976	5/1/2011	05/01/11(L)	5/1/2011	No
190224	HINTON	9/6/1974	9/27/1982	09/27/85(M)	9/27/1985	No
190477	KINGSLEY	8/6/1976	9/27/1985	09/27/85(M)	9/27/1985	No
190225#	LE MARS	1/16/1974	5/1/1978	5/1/1978	5/1/1978	No
190478	MERRILL	7/2/1976	11/6/1991	11/06/91(M)	11/6/1991	No
190479	OYENS	7/16/1976	-	7/16/1976	07/19/12(E)	No
190899#	PLYMOUTH COUNTY*	10/25/1977	9/18/1985	6/6/2001	9/18/1985	No
190480	REMSEN	3/19/1976	8/1/1986	08/01/86(L)	8/1/1986	No
190482#	WESTFIELD	8/13/1976	10/20/1999	6/6/2001	10/20/1999	No
<b>Woodbury County</b>						
190286#	ANTHON	1/23/1974	9/18/1985	9/29/2011	9/18/1985	No
190287#	BRONSON	8/30/1974	9/1/1986	09/29/11(M)	9/1/1986	No

190288#	CORRECTIONVILLE	2/22/1974	8/15/1990	9/29/2011	8/15/1990	No
190289#	CUSHING	8/9/1974	9/18/1985	09/29/11(M)	9/18/1985	No
190291#	HORNICK	10/18/1974	9/27/1985	09/29/11(M)	9/27/1985	No
190292#	LAWTON	8/16/1974	9/1/1986	09/29/11(M)	9/1/1986	No
190293#	MOVILLE	2/18/1977	9/1/1986	09/29/11(M)	9/1/1986	No
190295#	PIERSON	9/13/1974	9/18/1985	09/29/11(M)	9/18/1985	No
190296#	SALIX	10/18/1974	9/29/2011	09/29/11(M)	4/25/1980	No
190297#	SERGEANT BLUFF	3/29/1974	9/29/2011	(NSFHA)	3/18/1987	No
190298B	SIOUX CITY	8/2/1974	8/1/1979	3/2/2015	8/1/1979	No
190299#	SLOAN	5/24/1974	9/29/2011	09/29/11(M)	6/10/1980	No
190300#	SMITHLAND	11/12/1976	9/27/1985	09/29/11(M)	9/27/1985	No
190984#	WINNEBAGO INDIAN TRIBE	-	9/29/2011	9/29/2011	1/6/2010	Yes
190536B	WOODBURY COUNTY *	8/2/1977	6/17/1991	3/2/2015	6/17/1991	No

FEMA maintains a listing of NFIP participants in its online Community Status Book Report (<https://www.fema.gov/national-flood-insurance-program-community-status-book>). The preceding table details jurisdictional membership in the program. Of the five (5) counties, only Ida does not have a membership assignation for the County itself. No repetitive loss structures have been identified within the Region.

#### *Region Improvements*

Actions taken to improve mitigation processes are itemized within the counties and/or jurisdictions implementing such projects. Improvements affecting the Region as a whole include the following:

- Equipment upgrades and repairs for the SCFR HazMat response team
- Expansion of major roadways US-20 and I-29 intended to improve flow and therefore reduce accidents
- Completion of an information analysis for the Region – Hazardous Materials Commodity Flow Study, conducted through the Region IV LEPC
- SIMPCO Hwy 20 Economic Development Study
- Tri-State Incident Management team meetings and collaboration

One aspect of preparedness is accessibility. The Region has an ongoing plan for federally funded transportation projects whose intent is to improve access within, between, and



throughout the service area. Projects falling under the SRTPA area totaled \$9,325,000 in federal funds from 2014-2018 (source: SRTPA Transportation Enhancements/Alternatives Program, updated 2/14/2019). Each status varies by project and includes several variables. Program details are on the SIMPCO website under Divisions, *Transportation Planning* (<https://simpco.org/divisions/transportation-planning/transportation-improvement-programs/>).

*Supports*

The Region benefits from a number of resources by way of agency supports, planning documents, and regulatory guidance at state, district, and national levels. The following table identifies key components of the regional support network.

<b>State and Federal Resources</b>	
Stream Maintenance Program	Iowa Department of Natural Resources
Engineering Studies for Streams	
Floodplain Development Management	
State Planning Agencies	ICOG
	Iowa League of Cities
<b>Regional Resources (including Membership-Based Services)</b>	
Economic Development Plan	SIMPCO Comprehensive Economic Development Strategy (CEDS)
Transportation Plan	2045 SRTPA Long Range Transportation Plan
Regional Planning Agencies/Committees/Groups	SIMPCO
	Region IV Hazardous Materials Response Commission
	Region IV LEPC
2020 Regional Hazard Mitigation Plan	
<b>Uniform County Resources</b>	
Emergency Management Agency & Programming	Emergency Management Coordinator
	County Recovery Plan
	County Emergency Plan
<b>Funding Resources</b>	
CDBG	County Specific Funding Opportunities
HMEP	
SRF	
	<ul style="list-style-type: none"> <li>• Cherokee County Legacy Foundation</li> <li>• Ida County Community Betterment Foundation</li> </ul>

TAP	<ul style="list-style-type: none"> <li>• Monona County Community Partners Foundation</li> <li>• The Community Foundation of Greater Plymouth County</li> <li>• Missouri River Historical Development Grants (Wdby Co)</li> <li>• Iowa West Foundation (Monona)</li> </ul>
USDA	
Firefighters Support Foundation	
Gilchrist	
Flight 232 Fund	

#### D. 2014 Actions and Strategies

Following are the action items, including title and description, identified and applied to all jurisdictions in their respective 2014 plans. Each community assigned varying levels of commitment. Details of implemented actions and strategies are included in the update under *Community Profiles*. In the event that the project or action is still needed or under consideration, content of current action plans will include that information. Some action items were deemed to be outside the scope of individual jurisdictions and are noted as such below.

**Action 1.1.1:** *Maintain a list of sites for use as cooling stations in extreme heat.* Work with the public to maintain a list of sites available for public use during extreme heat events. These sites should be available 24 hours per day, or be made available after normal business hours.

**Action 1.1.2:** *Provide smoke detectors to property owners.* Make smoke detectors available to homeowners with a focus on low-income residents.

**Action 2.1.1:** *Review and update security procedures and equipment at critical facilities in the community.* Install flood protection barriers where appropriate. Renovate buildings for strength and safety, or take other measures to provide protection for critical facilities. Provide generators at critical sites.

**Action 2.1.2:** *Improve or acquire high-risk to flooding property.* Analyze each property that is subject to frequent flooding and identify feasible mitigation options. Offer incentives to encourage property owners to proceed with flood mitigation projects. City representatives should contact repetitive flooding property owners to identify the critical weaknesses in the property and discuss mitigation alternatives. Additionally, the property owner's willingness to pursue an improvement project should funding opportunities or incentives arise should be dialoged.

**Action 2.1.3:** *Improve drainage patterns in and around the community.* Improve drainage issues later identified by the City or identified in the Master Plan. Study, Design, and Construct improvements as need be.

**Action 2.1.4:** *Implement projects identified in the Capital Improvement Plan.* The CIP details multiple infrastructure projects that mitigation flooding within the community. This project serves to implement those projects throughout the community.

**Action 2.1.5:** *Roadway Elevation and Access.* Improve elevations of roadways in low-lying areas prone to flooding. Elevate roads above the adjacent land to minimize risk from flooding to the transport system. Under flood conditions, those works can serve as embankments, i.e. an obstruction to the water. Construct roads to enter towns from multiple directions. Having complete access to each part of town is vital to ensuring minimal response times during disaster events. Total access can be compromised by flooding, trains, or disaster debris.

**Action 2.2.1:** *Capital Improvements Program.* Capital improvement programs serve as a guide to community funding for physical improvements over a given time period. How funding is allocated can affect what is at risk. For example, the CIP can have funds allocated to replace or strengthen vulnerable or critical facilities such as hospitals, government buildings, and utilities.

**Action 2.2.2:** *Participation in National Flood Insurance Program.* Continue participating in the National Flood Insurance Program (NFIP). This program benefits the community by providing subsidized insurance to owners of property within the floodplain. Where needed, continue to update Floodplain maps.

**Action 2.2.3:** *Tree Planting Plan.* Develop an orderly system of tree planting to increase the quantity and variety of species of trees on City owned and maintained lands to repopulate urban forest and replace damaged or removed trees. The City can follow the developed tree planting guide for selecting trees for City lands.

**Action 2.2.4:** *Tree Maintenance Plan.* Develop an orderly system on maintaining the existing trees on City grounds. Maintenance should include the removal of dead or severely damaged trees and the trimming of trees in area parks and public properties.

**Action 2.3.1: Improve and Maintain Subdivision Regulations.** These regulations determine how a parcel of land can be divided into smaller parcels. It is wise to incorporate mitigation measures into subdivision regulations before a parcel of land is divided, as this allows for a wider variety of options. Furthermore, make changes to the subdivision ordinance that could assist in the mitigation of flooding include having no adverse impact.

**Action 2.3.2: Evaluate and Improve Building Standards.** Evaluate the existing construction standards and building codes to determine the degree of protection from natural disaster damage that is required of structures in the City. Additional standards

**Action 2.3.3: Continue/Begin Floodplain Regulations.** Continue to administer local floodplain development regulations for new and existing structures. Strict enforcement of the type of development and elevations of structures should be conducted through the issuance of building permits by the City. Research should be conducted to determine if stricter regulations should be implemented by the City for building construction. Also, continue to provide proper education for city officials to properly implement the regulations.

**Action 2.3.4: Preserve Natural Open Spaces.** Minimize development of natural drainage ways to allow for drainage of storm water through the City. This can be accomplished through zoning regulations or property acquisition at the City's schedule

**Action 2.3.5: Tree Board.** Elect or appoint a group of citizens to compose a tree board or commission. This board shall be responsible for developing and administering a City tree management program. This board will provide recommendations to the City for future plantings of trees and maintenance of the existing trees on City lands. An ordinance will be necessary to designate the establishment and authority of the tree board.

**Action 2.3.6: City Ordinance for Trees.** Enact an ordinance to set good tree maintenance policies and enforcement measures to be taken. The ordinance should provide guidelines for planting new trees along with maintenance and removal of existing trees on City owned or maintained grounds.

**Action 2.3.7:** *Implement Burning Ban Regulations.* Research and develop regulations for burning bans to be implemented during elongated periods of drought or extreme temperatures.

**Action 3.1:** *Increase public awareness of vulnerability to hazards / education.* Form a committee to gather and provide businesses and the public with information regarding hazards, management, and preparedness. Include information on preparedness when using public facilities. Recognize that language barriers may exist and provide materials in multiple languages if deemed necessary. These efforts can be conducted through community newsletters and utility billings.

**Action 3.2:** *Education on tree types and planting.* Maintain a listing of trees desirable for planting in the City. The list can serve as a guide to citizens planting new trees on private grounds. New tree plantings should have a low susceptibility to insect damage or disease and be of a hardy variety that will stand up well to heavy snow and ice loading as well as the force of high winds. Education programs should be developed to distribute information to citizens on how to reduce the risk from tree failure to life, property, and utility systems.

**Action 4.1.1:** *Additional equipment for emergency response.* Provide additional equipment as needed to respond to severe storms, winter storms, tornados, flooding and other hazards. These can include air conditioned portable shelters, ATVs, snowmobiles, generators, etc.

**Action 4.1.2:** *Improve the maintenance of roadway snow routes.* Develop a revised and improved snow and ice removal program for City streets. This plan should address situations such as plowing snow, removal of ice, parking during snow and ice removal, and removal of associated storm debris.

**Action 4.1.3:** *Snow Plan.* Build and maintain a standardized plan of action for City personnel to follow in the event of a snowstorm. This plan should include street clearing, checking utility service, checking for tree damage, and other potential risks to the City.

**Action 4.1.4:** *Obtain adequate equipment and training for first responders.* Purchase adequate first-rate equipment for both fire and police personnel. Provide training on the proper techniques for this equipment.

**Action 4.2.1:** *Identify, design, and develop storm shelters.* Many existing buildings are available for use as shelters in the event of a disaster. The City should develop plans to utilize these buildings in the event of a disaster. Additional buildings located in centralized population areas should be identified to increase the availability of shelter to the citizens of the City. Furthermore, research and develop requirements for construction of storm shelters in new areas of mobile housing or other high-risk housing to provide shelter for residents. Also, designate any hospitals, libraries, jails, and other facilities, Storm Shelters. Furthermore, educate people who will utilize these shelters as to where the shelters are located and what services are provided. Develop and distribute a brochure with this information to utility customers, property owners, homeowners etc.

**Action 4.3.1:** *Improve communication to residents and businesses during and following emergencies.* Create a formal contact point for emergency situations that is available around the clock for residents and businesses to contact. Examples are telephone hotlines, or public notice boards, cable system and specific radio frequency. This contact can provide information, assistance during, and following a disaster.

**Action 4.3.2:** *Community warning system.* Implement a community warning system to warn of threatening situations resulting from tornados, floods, or other local disasters. (Note that more specific community warning systems are listed below.) Recruit and train individuals in the proper storm watching techniques in order to increase potential warning times (Weather Spotters Program).

**Action 4.3.3:** *Improve local weather radio service.* Improve local weather radio service to notify over the radio and weather radio channels of disasters and supply pertinent information. This can be especially helpful for those living in unincorporated areas of the county. Note: This item is pertinent to Region, and to a lesser scale, county, applicability.

**Action 4.3.4:** *Cable TV interrupt warning system.* Implement a cable TV interrupt warning system that would notify cable TV viewers of disasters and supply pertinent information. Note: Cable TV interrupt warning systems are available at the discretion of the vendor/service provider and therefore not a jurisdictional decision.

**Action 4.3.5:** *Telephone interrupt warning system/reverse 911.* Implement a telephone-interrupt warning system that would notify persons via telephone of disasters and supply

pertinent information. Note: Telephone interrupt warning systems are available at the discretion of the vendor/service provider and therefore not an actionable item at the jurisdictional decision.

**Action 4.3.6:** *Purchase and issue weather radios for schools and critical facilities.* Conduct inventory of schools and critical facilities to see if they have working weather radios. Purchase, issue, and replace as needed.

**Action 4.3.7:** *Tornado warning system.* Work with the County to conduct an evaluation of implementing outdoor warning siren requirements for subdivisions requiring the developers to install sirens if out of range of existing sirens. These sirens would have to be connected to the City's existing warning system.

#### E. 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.

#### *Record of 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." <https://www.fema.gov/disaster-declaration-process>

Presidential Declarations since July 1, 2013 to present that include all or some of the Region follow.

- Iowa Severe Storms And Flooding (DR-4421)  
Incident Period: March 12, 2019 - June 15, 2019  
Major Disaster Declaration declared on March 23, 2019 (Region)
- Iowa Severe Storms, Tornadoes, Straight-line Winds, And Flooding (DR-4386)  
Incident Period: June 06, 2018 - July 02, 2018  
Major Disaster Declaration declared on August 20, 2018 (Chke Co, Wdby Co)
- Iowa Severe Storms, Tornadoes, Straight-line Winds, and Flooding (DR-4187)  
Incident Period: June 26, 2014 - July 07, 2014  
Major Disaster Declaration declared on August 05, 2014 (Ida Co)
- Iowa Severe Storms, Tornadoes, Straight-line Winds, and Flooding (DR-4184)  
Incident Period: June 14, 2014 - June 23, 2014  
Major Disaster Declaration declared on July 24, 2014 (Chke Co, Ida Co, Ply Co, Wdby Co)
- Iowa Severe Storms, Tornadoes, and Flooding (DR-4126)  
Incident Period: May 19, 2013 - June 14, 2013  
Major Disaster Declaration declared on July 02, 2013 (Chke Co, Ida Co, Mon Co, Ply Co)

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

–

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.

[https://www.homelandsecurity.iowa.gov/disasters/disaster\\_proclamations.html](https://www.homelandsecurity.iowa.gov/disasters/disaster_proclamations.html)

Iowa Governor's Disaster Declarations involving one or more counties in the Region follow showing date of declaration, declaration number, incident, and county/counties (July 1, 2013 to present).

2019

9/30	2019-31	Harvest proclamation	Statewide
3/15	2019-01	Flooding/Flash flooding, 3/13 & cont'g	Chke Co, Ply Co
3/14	2019-01	Flooding/Flash flooding, 3/13 & cont'g	Ida Co, Mon Co, Wdby Co

2018

11/13	2018-28	Harvest proclamation	Statewide
9/21	2018-23	Sever storm system, 9/19 & cont'g	Chke Co
9/15	2018-21	Harvest proclamation	Statewide
6/27	2018-06	Severe storm system, 6/14 & cont'g	Chke Co
6/23	2018-04	Severe storm system, 6/14 & cont'g	Ply Co, Wdby Co

2017

3/24	2017-03	Wildfires in CO, KS, OK, TX	Statewide
3/17	2017-02	Wildfires in CO, KS, OK, TX	Statewide

2016

*None affecting this region*

2015

9/25	2015-15	Harvest proclamation	Statewide
5/1	2015-02	Avian Influenza	Statewide

With additional proclamations & extensions issued through 7/28. Most impacted of the region: Chke Co, Ply Co.

2014

11/21	2014-26	Gasoline products shortage	Statewide
11/20	2014-25	Diesel fuel shortage	Statewide
7/9	2014-16	Severe storms, 6/14 & cont'g	Ida Co
7/9	2014-15	Severe storms, 6/14 & cont'g	Ply Co
6/20	2014-06	Severe storms, 6/13 & cont'g	Chke Co, Ida Co, Wdby Co

6/17	2014-05	Severe storms, 6/13 & cont'g	Ply Co
1/31	2014-01	Propane shortage	Statewide

2013

10/24-12/18	2013-22, 23, 24	Propane shortage	Statewide
9/27	2013-21	Harvest proclamation	Statewide

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 website found at [www.iihr.uiowa.edu/igs/loess-hills](http://www.iihr.uiowa.edu/igs/loess-hills).

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.

*Note: quoted text includes edits by Drew Hutchinson as provided*

## F. 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 **communication** 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 **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 well-planned projects that address **multiple issues** 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.

## G. Mitigation Actions, Strategies, & Projects

The intent of this Plan is to guide 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.

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.

1. Guiding Principles for determining Actions, Strategies, & Projects

<b>Actions/Strategies for Region</b>		
<b>communication /education</b>	local	Increase interactive communication and education of natural hazard awareness, preparedness, and available resources to improve capacity for response and loss prevention.
	county	
	region	
<b>tools/equipment</b>	power supply	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.
	safety/security	
	access	
<b>development</b>	mutual benefit; integrated project design/planning	Correlate Capital Improvement Projects, Economic Development projects, scheduled maintenance and repairs to necessary mitigation actions.
	acquisition – local	Consider (additional) properties for acquisition in high flood risk areas.
	local building standards/controls; development guidance/regulations	Monitor effectiveness and applicability of adopted and/or referenced ordinances, policies, and programs guiding community growth such as development regulations and established building standards.
	local relocation/fortification	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.
<b>flow control</b>	roadways	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.
	drainage	Improve drainage patterns in flood-prone areas by implementing features that improve flow and/or absorption and reduce runoff.
<b>refuge</b>	mutual benefit; integrated project design/planning	Identify, evaluate, and assess informal shelter locations.
<b>technology</b>	Improve access	Implement technology to more effectively assess, respond to, and recover from dangers associated with hazard events.
	Increase use of existing	
<b>natural barriers/ supports</b>	Develop plan	Stabilize or increase naturally occurring mitigation features such as tree cover, wetlands, and/or greenspace.
	Determine if plan is needed	

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, and 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](http://www.simpco.org) under Divisions, Transportation Planning.

## 2. 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 a 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. 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 base don 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.

### 3. Identified Actions, Strategies, & Projects

<b>Communication /Education</b>		
<ul style="list-style-type: none"> <li>• Increase interactive communication and education of natural hazard awareness, preparedness, and available resources to improve capacity for response and loss prevention.</li> <li>• Improve communication between mutually affected departments/organizations</li> </ul>		
<i>Goals Addressed</i> 1,2	<i>Hazards</i>	<ul style="list-style-type: none"> <li>- All Natural Hazards</li> <li>- All Human-caused or Biological Hazards</li> </ul>
Promo/Info	<b>All Counties</b>	Interest in promo & estab'd practice of Alert Iowa system; <i>County EMA, County Administration &amp; Clerk</i> (No dedicated funding necessary) HIGH PRIORITY
	<b>All Cities</b>	Interest in promo & estab'd practice of Alert Iowa system; <i>City Clerk, County EMA</i> (No dedicated funding necessary) HIGH PRIORITY
	<b>All School Districts</b>	Interest in promo & estab'd practice of Alert Iowa system; <i>School communications teams, County EMA</i> (No dedicated funding necessary) HIGH PRIORITY
	Aurelia	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
	Cleghorn	Interest in promo & estab'd practice of Alert Iowa system; Promote programs as available through regional resources. <i>City Clerk, County EMA</i> (No dedicated funding necessary) HIGH PRIORITY
	Galva	Need for secured gate and "Restricted" signage at the sewer plant; <i>City Maintenance/Public Works</i> (Local Funds, Community benefit grants) HIGH PRIORITY
		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
	Hinton	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 &amp; Public Works, County Engineer, Iowa DOT</i> (necessity for dedicated funds not anticipated) HIGH PRIORITY
Ida Co	Actively promote available trainings; <i>County EMA, County Admin Staff</i> (no funding need anticipated) HIGH PRIORITY	

	Larrabee	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 to this project)
	Plymouth Co	Signage needed to better define restricted areas; <i>County Engineer, Sanitarian</i> (County funds) HIGH PRIORITY
	Remsen	Interest in promo & estab'd practice of Alert Iowa system; <i>City Clerk, County EMA</i> (No dedicated funding necessary) HIGH PRIORITY
	Struble	Interest in promo & estab'd practice of Alert Iowa system; Promote programs as available through regional resources. <i>City Clerk, County EMA</i> (No dedicated funding necessary) HIGH PRIORITY
	Whiting	PSA program to promote education about tree types and planting; <i>City Clerk</i> (no funding anticipated) LOW PRIORITY
Warning Sirens	Akron	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
	Blencoe	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
	Bronson	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
	Danbury	Warning Siren needs replacing; <i>City Council, County EMA</i> (Local funds, County Funds, PDM, Community Benefit funds) HIGH PRIORITY
	Holstein	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
	Ida Co	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
	Monona Co	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 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
	Moorhead	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
	Moville	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
	Oto	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
	Salix	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
	Sloan/ Westwood Schools	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
	Smithland	Warning siren improvement/replacement needed to better perform alerts for residents. Replacement or updating must include connection to County Communications Center. <i>City Council. City staff, County EMA.</i> (Local funds, county supports, community benefits programs, fundraising, PDM) HIGH PRIORITY
	Turin	City needs to install 2 <sup>nd</sup> warning siren to increase alert capacity during severe weather conditions. <i>City Council, County EMA.</i> (Local funds, County supports, PDM) HIGH PRIORITY
Programs	Hornick	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
	River Valley CSD	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

Assessment/Study	Le Mars	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
	Woodbury Co	Econ Dev - Work on measures necessary to reduce NFIP participant costs for communities. County Economic Dev, IDNR (County funds as needed) HIGH PRIORITY

<b>Tools/Equipment</b>		
<ul style="list-style-type: none"> <li>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.</li> </ul>		
Goals Addressed 3, 4, 5	<b>Hazards</b> - Flood - Severe Winter Storm - Thunderstorm w/Hail & Lighting	
Stabilization	<b>All</b> Counties	Assess and test drainage controls on routine schedule. Additional assessment during heavy periods of rain/snow melt. Include efforts to stabilize guideways. <i>Respective departments under Secondary Roads, contracted professionals as needed</i> (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
	<b>All</b> Cities	Assess and test drainage controls on routine schedule. Additional assessment during heavy periods of rain/snow melt. Include efforts to stabilize guideways. <i>Respective departments under Public Works, Streets, City Council, contracted professionals as needed</i> (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
	<b>All</b> School Districts	Assess and test drainage controls on routine schedule. Additional assessment during heavy periods of rain/snow melt. Include efforts to stabilize guideways. <i>Respective departments under Plant Engineering, Maintenance, School Board, contracted professionals as needed</i> (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

	Anthon	Riverbank stabilization @ access point; City administration (City funds, Disaster funds, PDM) HIGH PRIORITY
	Castana	Modify road overlay with "packable rock" or more stable substance to minimize washout episodes; City Maintenance (City funds, PDM) MEDIUM PRIORITY
	Holstein	Drainage projects to stabilize dirt in areas prone to washout; <i>City Maintenance/Streets</i> (Local funds, PDM) HIGH PRIORITY
		Substantiate barriers @ gateway to community; <i>City administration, County Engineer, EMA</i> (Local funds, County funds, PDM, Community benefit grant funds) HIGH PRIORITY
Ida Grove	Rip rap needed @ Moorhead Ave Bridge; <i>City administration &amp; Streets Dept, County Engineer</i> (Local funds, if scheduled accordingly State/Federal Transpo funds PDM) HIGH PRIORITY	
Generator & Related Projects	<b>All Counties</b>	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
	<b>All Cities</b>	Assess availability of generators for all critical facilities, portable or permanent. Prep all critical facilities for connection to generators as applicable; <i>Public Works, Utility department heads</i> (Varying levels of funds needed. Support may come through local, county, State, and Federal grant and loan programs) HIGH PRIORITY
	<b>All School Districts</b>	Assess availability of generators for all critical facilities, portable or permanent. Prep all critical facilities for connection to generators as applicable; <i>Plant Engineering</i> , (Varying levels of funds needed. Support may come through host City, County, District funds, State, and Federal grant and loan programs) HIGH PRIORITY
	Akron	Transformer needed at wells to make ready for generator connections; <i>City Public Works &amp; Waterworks Depts</i> (Local funds, Community benefit fund grants) HIGH PRIORITY
	Arthur	Interest in a dedicated generator for the waterworks; <i>City Waterworks/Public Works Maintenance</i> (Local Funds, PDM, Community Benefits grants) HIGH PRIORITY
		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
	A-W CSD	Generator on facilities list but implementation not scheduled; <i>School Board, Collaboration with city hosting facility, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY

Blencoe	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
Bronson	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
Cherokee (City of)	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
Cherokee County	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
	On-site permanent generator for Courthouse; <i>County EMA</i> (County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Danbury	Portable generator <i>City Council, County EMA</i> (Local funds, County supports, State/Federal response funds, PDM, Community Benefits funds) HIGH PRIORITY
Hinton	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
Holstein	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
Ida Grove	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
Kingsley	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
Lawton	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
Mapleton	<i>Additional generators; City Administrator, Waterworks, County EMA</i> (City funds, community benefit funds, IDOT program funds, PDM funds) HIGH PRIORITY
Marcus	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 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 @ 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
Moorhead	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
Onawa	Additional generators; <i>City Administrator, Waterworks, County EMA</i> (City funds, community benefit funds, IDOT program funds, <b>PDM funds</b> ) HIGH PRIORITY
Pierson	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
Sgt Bluff	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
Sioux City	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
Ute	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
Westwood CSD	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
Woodbury Co	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
	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

Policy	All Counties	Implement Policy/formalize Procedure as needed to cross-reference development and planning documents to address multiple needs with new projects including but not limited to Comprehensive Plans, Capital Improvement Plans, Economic Development guidance, County Code of Ordinances, Zoning, and emergency response plans. <i>County Board, School Board, SIMPCO/Contracted consultation</i> (procedural cost minimal as part of scheduled actions; some expense may be incurred to develop plans and may be funded through County funds, State planning funds) MEDIUM PRIORITY
	All Cities	Implement Policy/formalize Procedure as needed to cross-reference development and planning documents to address multiple needs with new projects including but not limited to Comprehensive Plans, Capital Improvement Plans, Economic Development guidance, local legislation, zoning, and emergency response plans. <i>City Council, SIMPCO/Contracted consultation</i> (procedural cost minimal as part of scheduled actions; some expense may be incurred to develop plans and may be funded through local funds, State planning funds) MEDIUM PRIORITY
	All School Districts	Implement Policy/formalize Procedure as needed to cross-reference development and planning documents to address multiple needs with new projects including but not limited to Comprehensive Plans, Capital Improvement Plans, and emergency response plans. <i>School Board, District Administration</i> (procedural cost minimal as part of scheduled actions; some expense may be incurred to develop plans and may be funded through District planning funds) MEDIUM PRIORITY
	Onawa	Review/revision of subdivision regulations to address runoff concerns resulting from displacement; <i>City Council, Zoning Commission, City Attorney</i> (Local funds) MEDIUM PRIORITY
	Whiting	Consider formalizing reference to DNR for Floodplain Development; <i>City Council, Zoning Commission, City Attorney</i> (Local funds) LOW PRIORITY
	Equipment	Aurelia
Battle Creek		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
Correctionville		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

	Danbury	Pumps; <i>City Council, Public Works, collaboration with County EMA</i> (Local funds, County funds, Community Benefit funds, fundraising, Federal programs, PDM) HIGH PRIORITY
		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
	Hinton	Mobile pump; <i>City Maintenance/Public Works</i> (City funds) MEDIUM PRIORITY
		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
	Holstein	Additional snow removal equipment; <i>City Council, Public Works/Maintenance</i> (Local funds) LOW PRIORITY
	Ida County	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
		ATV for access to levees for inspection regardless of road conditions. <i>County EMA</i> (County funds) MEDIUM PRIORITY
		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
	Ida Grove	Snow removal equipment needs updating. <i>City Streets Department</i> (City funds) LOW PRIORITY
		Motor in the grader needs updating. <i>City Streets Dept</i> (City funds) MEDIUM PRIORITY
		Larger capacity pump; <i>Public Works, Streets Dept</i> (City Funds, PDM, Community Benefit funds) HIGH PRIORITY
		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
	Mapleton	Lift station for water plant; <i>City Water Supt</i> (City funds, PDM) HIGH PRIORITY
	Monona Co	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
Communications Trailer. <i>County Board, EMA</i> (County funds, PDM) MEDIUM PRIORITY		

	Trailer designated for road barricade set-up; <i>County Engineer</i> (County funds, IDOT, PDM) HIGH PRIORITY
Moville	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
Onawa	Snow removal equipment; <i>City Streets Dept</i> (City funds, transportation funds) LOW PRIORITY
	Pump with greater than 6" capacity – function @ 1,000 gallon per minute; <i>City Administrator</i> (City funds, PDM) HIGH PRIORITY
	Boat; <i>City Administrator, Fire Chief collaboration</i> (City Funds, Response support funds, PDM) LOW PRIORITY
Oto	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
Pierson	ATV for use during road blockages; <i>City Council</i> (City funds, PDM) Low PRIORITY
Sgt Bluff	Pumps for clean water transfer; <i>City Administrator, Streets Department</i> (City funds, PDM) HIGH PRIORITY
	Replace rescue boat; <i>Fire Department/EMS</i> (Department funds, City supports, Response support funds, fundraisers, PDM) LOW PRIORITY
	ATV for police Department to minimize access issues; <i>Police Dept</i> (Department funds, City supports, fundraisers, PDM) LOW PRIORITY
Whiting	Interest in additional/better performing snow removal equipment; <i>City Council</i> (City funds, IDOT program funds, PDM) LOW PRIORITY
Woodbury County	Sandbagging equipment/HESCO bags; <i>County Engineer, potential collaboration with partner County</i> (County funds, IDOT program funds, PDM) HIGH PRIORITY
	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
	Additional pumps - 12" & 18" capacity; <i>County Engineer</i> (County funds, IDNR program funds, PDM) HIGH PRIORITY

**Development**

- Correlate Capital Improvement Projects, Economic Development projects, scheduled maintenance and repairs to necessary mitigation actions.

<ul style="list-style-type: none"> <li>• Consider (additional) properties for acquisition in high flood risk areas.</li> </ul>	
<ul style="list-style-type: none"> <li>• Monitor effectiveness and applicability of adopted and/or referenced ordinances, policies, and programs guiding community growth such as development regulations and established building standards.</li> </ul>	
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	
<b>Goals Addressed</b> 1, 3, 4, 5	<b>Hazards</b> - Flood - Grass or Wildland Fire - Thunderstorm w/Hail & Lighting - Severe Winter Storm
<b>Improve existing facilities &amp; infrastructure</b>	<b>Aurelia</b> 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)
	<b>Cherokee</b> Improve capacity and function of sewer system; <i>City Waterworks</i> (City funds, USDA program funds, IDNR program funds) MEDIUM PRIORITY
	<b>Cleghorn</b> 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
	<b>Cushing</b> 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
	<b>Galva</b> 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
	<b>Hinton</b> Water booster to improve capacity as accesses through fire hydrants. <i>City Waterworks, Fire Chief</i> (City funds, Fire Department funds, PDM) MEDIUM PRIORITY Lining sewer and manholes in flood plane to eliminate infiltration from flooding and water table; <i>City Maintenance &amp; Waterworks</i> departments, IDNR (IDNR program funds, City funds, PDM) HIGH PRIORITY 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
	<b>Ida County</b> 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

		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
	Ida Grove	Casements along 7th St (Badger Creek); <i>City Roads Dept, collaborate with County Engineer</i> (City funds, IDOT Program funds, PDM) HIGH PRIORITY
	Le Mars	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
	Mapleton	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
		Rebuild needed for lift station @ 8th & Ring; <i>City Water &amp; Public Works Depts</i> (City funds, IDNR, PDM) HIGH PRIORITY
	Quimby	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
	Soldier	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
	Ute	Waterworks and water tower project including generator backup system. <i>City Clerk, Project administrator, Engineering consultant</i> (City funds, Loans, CDBG) HIGH PRIORITY
Relocate critical facilities	Battle Creek	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 &amp; Engineer as applicable.</i> (Local funds, PDM, Bonds/Loans through approved programs) HIGH PRIORITY
	Cherokee	Move/raise lift station at Beech St; <i>City Water &amp; Public Works Depts</i> (City funds, IDNR, PDM) HIGH PRIORITY

	Ida Grove	Lift station needs raising -- Hillcrest (Off 5th St); <i>City Water &amp; Public Works Depts</i> (City funds, IDNR, PDM) HIGH PRIORITY
	Quimby	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
	Sgt Bluff	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
Bridges & Roads	Cherokee	Collaborate w/County and State on review of and implementation of roadway elevation improvements along Hwy 3 and/or Hwy 59; <i>City Administrator &amp; Streets Dept, County Roads Dept, IDOT</i> (Transportation funds, City/county funds) MEDIUM PRIORITY
	Danbury	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
	Hinton	Resurface alleys due to washout during rain events. <i>City Streets Dept</i> (City funds, PDM) HIGH PRIORITY
	Ida County	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; <i>County Engineer, Collanorate w/City Admin</i> (County funds, Transportation funds, PDM) LOW PRIORITY
		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
	Ida Grove	Potential paving project on 6th St to improve drainage; <i>City Streets Dept</i> (City funds, Transportation funds, PDM) LOW PRIORITY
		Full renovation of City Hall & attached community center/senior center, starting with roof. <i>City project Manager, Council</i> (Community Catalyst Building Remediation funds, Private funds, City funds, Connections Area Agency on Aging, AARP Healthy Communities funds) MEDIUM PRIORITY
	Meriden	Street repaving project to address washout and weather-related deterioration. <i>City maintenance, City Council.</i> (Local funds)
Monona County	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	



	Onawa	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
	Plymouth County	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
	Remsen (amended at local level 08/10/2020)	Box culvert replacement in flood prone area (5 <sup>th</sup> St between Jackson and Marion Streets). <i>City of Remsen, Beck Engineering, contracted services, City Clerk, Public Works.</i> Funding through FMA or BRIC, local match via Road Use funds and Local Option funds. HIGH PRIORITY.
	Rodney	Interest in roadway drainage improvements; <i>City Council</i> (City funds, transportation funds, Community Benefit funds) LOW PRIORITY
	Soldier	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 &amp; City of Ute as applicable.</i> (Local funds, transportation funds, approved bonding and local programs) HIGH PRIORITY
	Whiting	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
		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
	Woodbury Co	Secondary Roads - about 30 bridge replacements necessary -- some immediate, <i>County Engineer, Contracted services</i> (County funds, IDOT Transportation funds) HIGH PRIORITY
		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
		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

**flow control**

- 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.

Goals Addressed 1, 3, 4	Hazards - Flood	
Flood protection	Cherokee	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
	Hinton	Floodgates @ dike; <i>City Council, IDNR</i> (City funds, PDM) HIGH PRIORITY
	Hornick	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
	Le Mars	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
	Meriden	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
	Westfield	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)
Drainage projects	<b>All</b> Counties	Implement measures to perform scheduled maintenance in ditches and drainways, accommodating additional pre- and post-storm action to minimize blockages; <i>County Secondary Roads Department &amp; Conservation as applicable</i> (City funds, County funds, District funds) HIGH PRIORITY
	<b>All</b> Cities	Implement measures to perform scheduled maintenance in ditches and drainways, accommodating additional pre- and post-storm action to minimize blockages; <i>City Maintenance, Collaborate with County Secondary Roads Department &amp; Conservation as applicable and Plant Engineering for affected School properties</i> (City funds, County funds, District funds) HIGH PRIORITY

All School Districts	Implement measures to perform scheduled maintenance in ditches and drainways, accommodating additional pre- and post-storm action to minimize blockages; <i>Plant Engineering for School properties, collaboration with City Maintenance, County Secondary Roads Department &amp; Conservation as applicable, (City funds, County funds, District funds) HIGH PRIORITY</i>
Correctionville	Implement drainage projects as identified; <i>City Administrator/Streets/Public Works (Local funds, IDNR project funds, PDM) HIGH PRIORITY</i>
Hinton	Stormwater management projects - drainage improvements; <i>City Administration, Contracted services, IDNR (Local funds, IDNR program funds, Disaster funds, PDM) HIGH PRIORITY</i>
Holstein	Sidewalk trail at ball field and rec center with drainage project incorporated; <i>City Administration, Contracted services, County collaboration for trail projects (Health &amp; Wellness funds, Transportation Alternatives funds, Local funds, fundraisers, Walk/Bike program funds) LOW PRIORITY</i>
Ida Co	At Quimby drainage ditch dredging from Quimby and establishing routine/scheduled maintenance; <i>County Engineer, Collaborate with City staff, IDNR (County Roads funds, local funds) HIGH PRIORITY</i>
Ida Grove, OABCIG	Drainage improvements are needed between the high school and Badger Creek; <i>City Administrator, School Board or Plant Engineering, IDNR (Local funds, School District funds, IDNR program funds) HIGH PRIORITY</i>
Ida Grove	There is interest in improving drainage at Cobb Park - raise elevation, pump to drain; <i>City Administrator, IDNR (Local funds, IDNR program funds, PDM) LOW PRIORITY</i>
Kingsley	Terracing needed to ease floodplain restrictions. <i>City Administration, County Engineer collaboration, IDNR, Contracted services (Local funds, County funds, IDNR Program funds, USDA program funds/loan program, Disaster funds, PDM) LOW PRIORITY</i>
Mapleton	Wetlands designation within city limit; <i>project led by Mapleton Community Development Corps in collaboration with the Department of Agriculture and the DNR (Limited expense anticipated) HIGH PRIORITY</i>
Merrill	Improve ditch and drainway management. Conduct through clearing and implement maintenance plan. <i>City Council, City staff (Local funds) HIGH PRIORITY</i>

**refuge**

- Identify, evaluate, and assess informal shelter locations.

Goals Addressed 3, 4, 5	Hazards - Flood	
Shelter	Correctionville	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
	Hinton	Storm Shelters @ City Parks; <i>City Administration, County EMA collaboration</i> (Local funds, Improving public spaces funds, PDM) LOW PRIORITY
	Ida Grove	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
	Lawton	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
	Marcus	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
	Merrill	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)
	Monona County	At Onawa: Interest in adding formal storm shelter with tornado designation at the Fairgrounds &/or 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
		potential: storm shelter @ Fairgrounds. <i>County EMA, County Parks Dept/Conservation, City administration</i> (County funds, fundraisers, Ag Event support funds, Community Benefit funds, PDM) LOW PRIORITY
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		

<b>technology</b>		
<ul style="list-style-type: none"> <li>• Implement technology to more effectively assess, respond to, and recover from dangers associated with hazard events.</li> </ul>		
<b>Goals Addressed</b>  1, 2, 3, 4	<b>Hazards</b>	<ul style="list-style-type: none"> <li>- All Natural Hazards</li> <li>- All Human-caused or Biological Hazards</li> </ul>
<b>Improve effectiveness</b>	<b>All Counties</b>	Implement opportunities to improve broadband and cell service at all points within region. <i>County Boards, Collaborate with affected City Councils &amp; School Districts, Internet/Cellular Service providers, Economic Development coordinators</i> (State programs, Economic Development programs, Private investment/market expansion, PDM) HIGH PRIORITY
	<b>All Cities</b>	Implement opportunities to improve broadband and cell service at all points within region. <i>City Council, Collaborate with affected School Districts, Internet/Cellular Service providers, Economic Development coordinators</i> (State programs, Economic Development programs, Private investment/market expansion, PDM) HIGH PRIORITY
	<b>All School Districts</b>	Implement opportunities to improve broadband and cell service at all points within region. <i>School District Board, collaborate with affected City Council, County Boards, Internet/Cellular Service providers, Economic Development coordinators</i> (State programs, Economic Development programs, Private investment/market expansion, PDM) HIGH PRIORITY
	A-W CSD	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
	MMC CSD	District would like to place weather radios in each building; <i>School Board, Collaboration with EMA</i> (District funds, potential PDM funds) MEDIUM PRIORITY
	Moville	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
	Rodney	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
	Woodbury Co	Improved communication w/County re: warning siren test schedule; <i>City administration, County EMA</i> (no cost anticipated) HIGH PRIORITY
Woodbury Co	EMA - Improve weather radio/communication receptors in southeast area of county; <i>County EMA, County Board, State Communications</i> (County funds, state program funds, PDM) MEDIUM PRIORITY	



<b>natural barriers/ supports</b>		
<ul style="list-style-type: none"> <li>Stabilize or increase naturally occurring mitigation features such as tree cover, wetlands, and/or greenspace.</li> </ul>		
Goals Addressed 1, 3, 5	Hazards	<ul style="list-style-type: none"> <li>Extreme Heat</li> <li>Flood (Flash)</li> </ul>
Retention Pond	Bronson	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
Dyke improvement	Merrill	Implementation of improvements to substantiate dyke as barrier to flooding. <i>City Council, County, and DNR collaboration as applicable.</i> (Local funds)
Trees	Rodney	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

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.

#### 4. Region-wide Recommendations

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	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.
	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.)

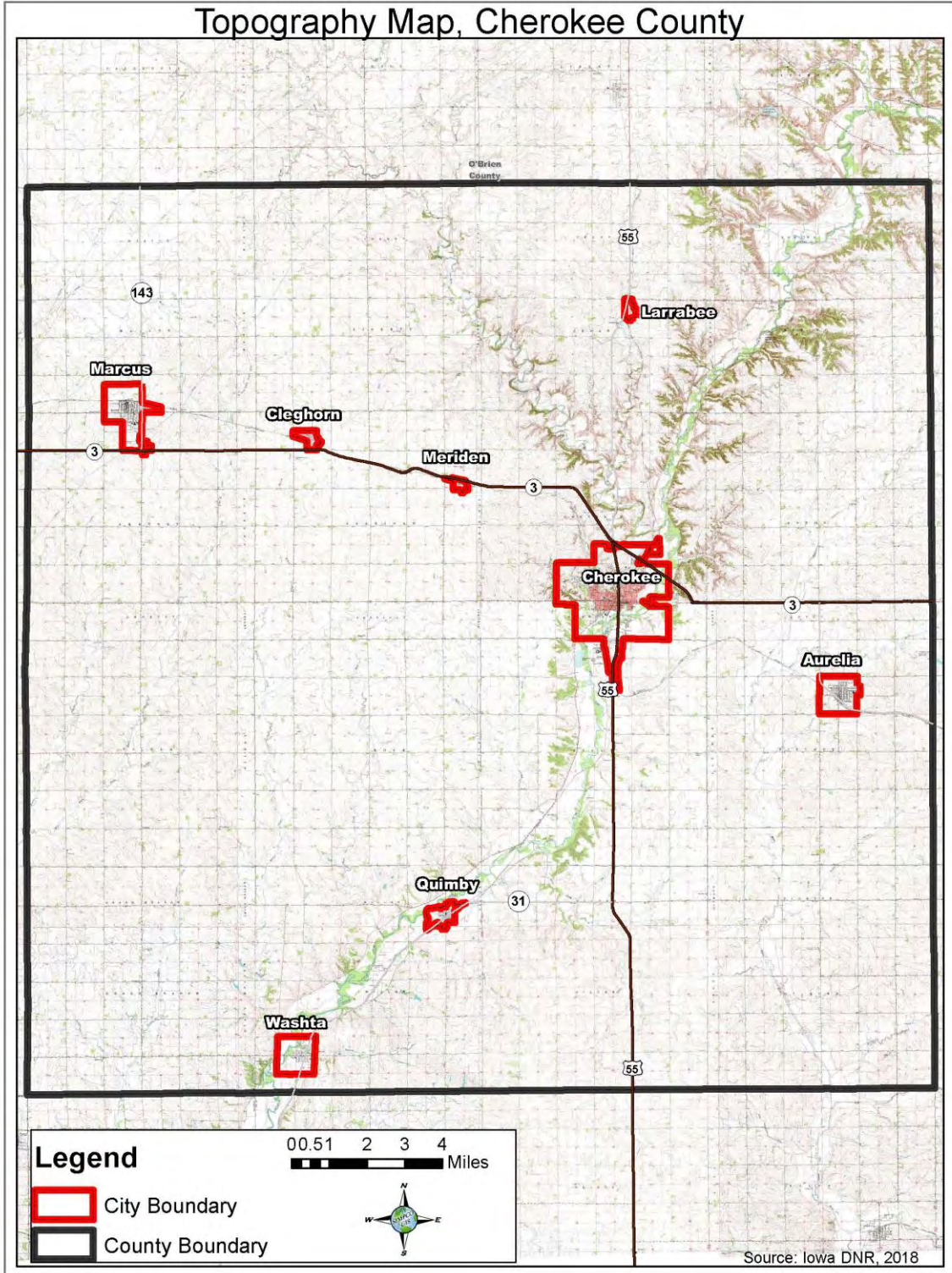
Human Resources	Address decline in volunteer response departments necessitates need for action. Paid staff or at minimum paid time for training to meet certification requirements.
	Assess how other smaller communities are addressing volunteer shortages. Standardize "junior" responders -- high school 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.
	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.*



#### IV. Counties & Cities Participating as Jurisdictions

##### A. Cherokee

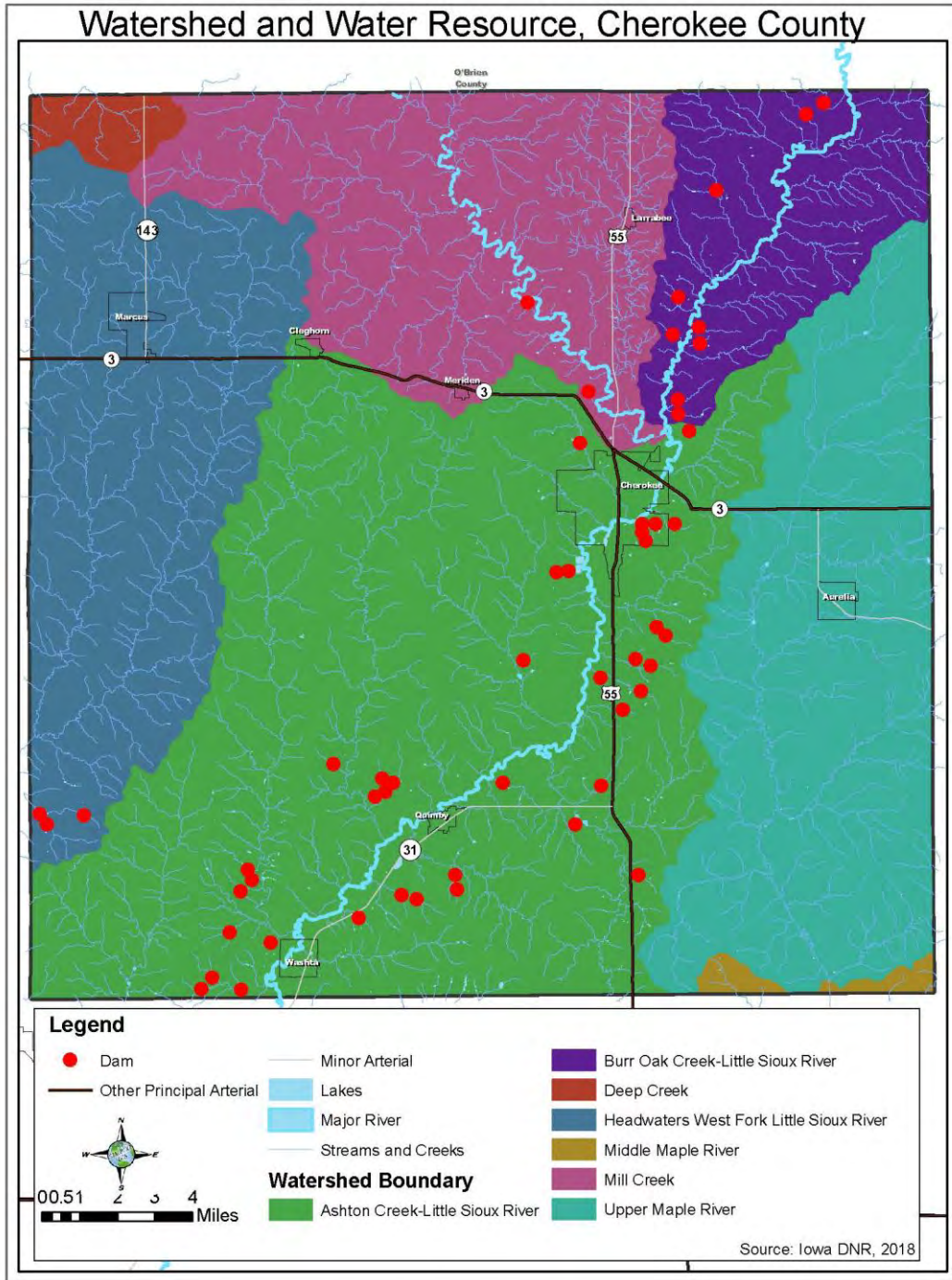




Profile – Unincorporated Area & County

Cherokee County is centrally located in the northwest quarter of Iowa. The County is bordered by O'Brien County to the north, Buena Vista County to the east, Ida County to the south, and Plymouth County to the west. Cherokee County is approximately 577 square miles.

Cities within Cherokee County include Aurelia, Cherokee, Cleghorn, Larrabee, Marcus, Meriden, Quimby, and Washta.



### *Rivers & Watersheds*

The Little Sioux River runs diagonally from northeast to southwest through the County. While this is the only significant river, there are a number of smaller creeks including Perry Creek, Stratton Creek, and Pierson Creek.

There are three (3) primary watersheds within the County that drain storm water and snow melt into streams and lakes, wetland areas, or into groundwater reserves. These watersheds are Little Sioux Watershed, Monona-Harrison Ditch Watershed, and Maple Watershed. The following map shows sub-watersheds for Cherokee County. Regional breakdown for watersheds is provided in *Planning Area* information. The following map depicts the sub-watersheds within those as listed above. Subwatersheds are determined based on hydrologic unit code (HUC) level 12, which includes more detail including tributary data.

### *Landform Regions & Geology*

Some resources (such as Iowa Landscapes in Google Maps) indicate that Cherokee County is composed entirely of a single geological landform region, the Northwest Iowa Plains. The Northwest Iowa Plains are marked by rolling hills, which are the result of the manipulation of glacial sediment deposits, by glacial melt and streams. Other resources reference presence of Southern Iowa Drift Plain as well (<https://www.ihr.uiowa.edu/igs/southern-iowa-drift-plain/>).

### *Transportation network*

U.S. Highway 59 and State Highways 3, 7, 31, and 143 are all included in the County's transportation network.

The County's secondary road system is composed of 1,004.35 miles. Within this category, Farm-to-Market roads make up 311.07 miles, while Area Service roads account for 693.28 miles. Gravel or earth surface types account for 780.10 miles of the secondary road system. The remaining 217.02 miles are composed of bituminous, asphalt, or PCC surface types.

### *County Governance & Supports*

The county seat is located in the city of Cherokee, which is just northeast of the center of the County. Its jurisdiction covers all unincorporated portions within county boundaries. A five

(5)-person Board of Supervisors governs Cherokee County. The Board acts as the legislative body for the County. Additional offices include the following departments:

- Assessor
- Attorney
- Auditor
- Community Services
- Conservation
- Emergency Management
- Engineer
- Environmental Health
- General Relief
- GIS – Mapping
- Recorder
- Secondary Roads
- Sheriff
- Technology/Website Admin
- Treasurer
- Veterans Affairs
- Zoning

The Cherokee County’s Emergency Management Agency is responsible for the development and maintenance of relevant planning documents, coordinates plans and facilities, and sponsors training opportunities for emergency responders, partner agencies, and the public. The Cherokee County Sheriff’s Office provides law enforcement to all rural portion of the County including towns of Larrabee, Meriden, Cleghorn, Quimby, and Washta. The office is staffed by a sheriff and seven (7) additional employees.

*County Facilities*

Storage	405 1/2 Coombs Dr	Aurelia
Storage	118 N Main	Larrabee
Radio Equipment	118 N Main	Larrabee
Law Enforcement Center	111 N 5th	Cherokee
Courthouse	520 W Main	Cherokee
War Memorial Bldg	520 W Main	Cherokee
Conservation Office; Storage	629 River Road	Cherokee
Martin Access, County Park	SE 1/4 NW 1/2 Sec 32-91-40	Cherokee
Work Activity Center	322 Lake St	Cherokee
Garage	322 Lake St	Cherokee
Offices; Shop; Bldgs	5074 Hwy 3 W	Cherokee
LEC Radio Equip	5074 Hwy 3 W	Cherokee
Storage	406 E 4th St	Quimby

Storage	408 W Sanford	Washta
Storage	601 W Cedar	Marcus
Radio Equipment	601 W Cedar	Marcus
Storage	409 W 1st	Meriden
E911 Radio Equip	113 S Lewis St	Cleghorn
E911 Radio Equip	1880 570th St	Cherokee
Cabins	5494 Martin Access Rd	Cherokee
Park Equip	5494 Martin Access Rd	Cherokee
Siren	5494 Martin Access Rd	Cherokee

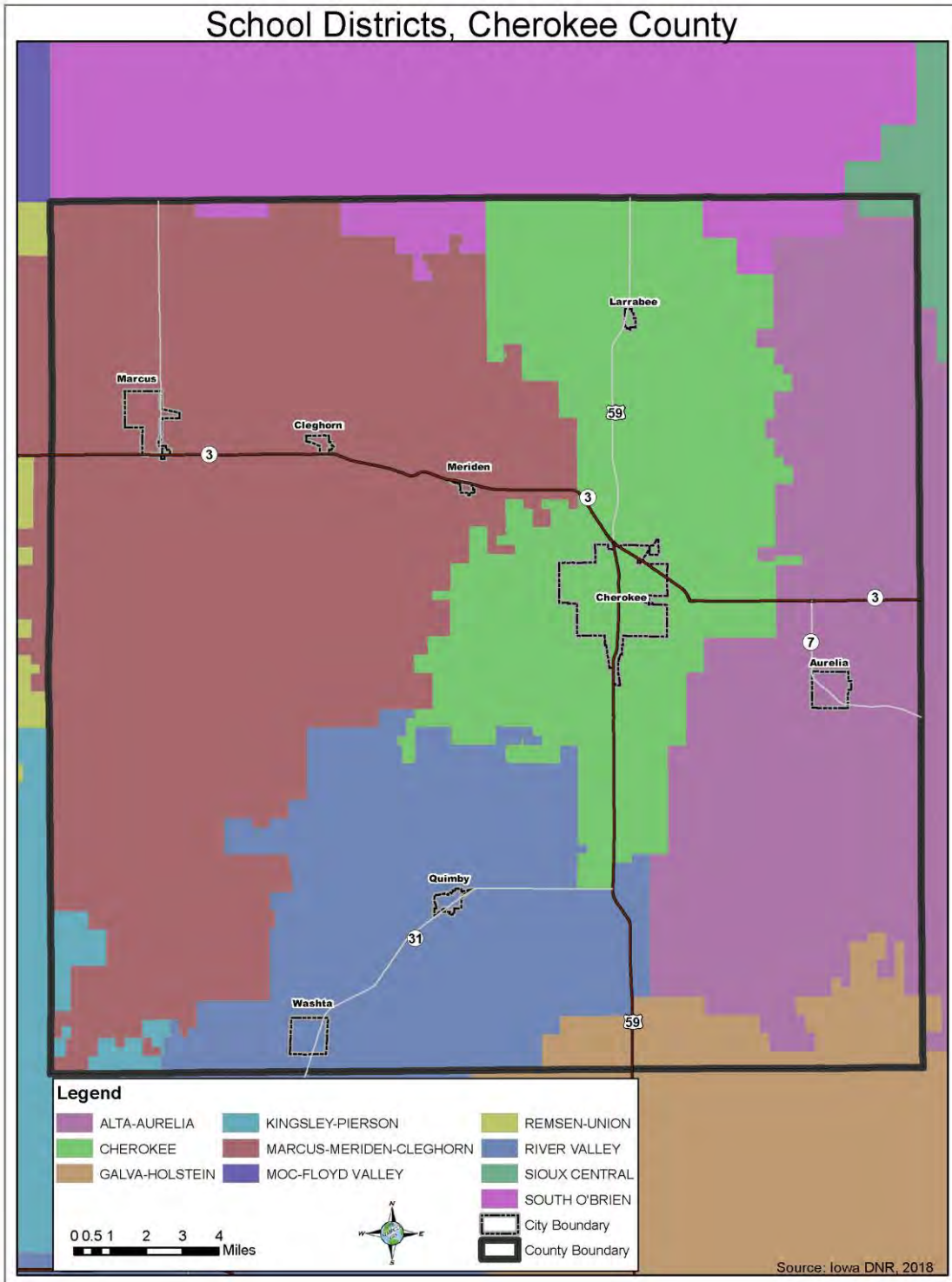
### Education

As with other counties in the region, Cherokee County has a slightly higher percent of its population with a high school degree or equivalency compared to the state of Iowa. The County has a lower percent of its population with a bachelor's degree and graduate or professional degree. Cherokee County is unique compared to nearby counties in that it has a higher percent of its population with an Associate's degree compared to the State.

<b>Level of Education</b>	<b>Cherokee</b>	<b>Iowa</b>
No high school diploma	9.26%	8.16%
High school degree (includes equivalency)	35.81%	31.52%
Some college, no degree	21.81%	21.31%
Associate's degree	13.66%	11.34%
Bachelor's degree	14.42%	18.71%
Graduate or professional degree	5.05%	8.97%

Local enrollment numbers for public schools are included within the statistics and data presentation for each district. In Cherokee County, there are 10 public schools serving four (4) school districts.

The district listing and facilities table follow.



- Alta-Aurelia Community Schools
- Cherokee Community School District
- Marcus-Meriden-Cleghorn-Remsen Community School District
- River Valley Community School District



<b>County Educational Facilities</b>	
Alta-Aurelia Elementary/Middle School	300 Ash Street, Aurelia
Cherokee Community Schools	600 W Bluff, Cherokee
Cherokee Middle School	200 E Indian Street, Cherokee
Early Childhood Learning Center	929 N Roosevelt, Cherokee
Marcus Meriden Cleghorn Jr. Sr. School	400 E Fenton St, Marcus
Marcus Meriden Cleghorn Primary	500 E Fenton St, Marcus
Marcus-Meriden-Cleghorn East Elementary School	200 Campbell St, Cleghorn
River Valley Community School	100 S 5 <sup>th</sup> St, Washta
Roosevelt Elementary School	929 N Roosevelt, Cherokee
Washington High School	600 W Bluff St, Cherokee
Western Iowa Tech Community College	200 Victory Dr, Cherokee

There are three (3) private schools located within the County. While there are not public or private standalone universities located within Cherokee County, Western Iowa Tech Community College (WITCC) does have a small campus in the city of Cherokee. WITCC is a public two-year college.

### *Population*

Based on 2010 census data, the population of Cherokee County was 12,027. American Community Survey (ACS) data estimates show the 2017 population at 11,577, indicative of possible population decline. Focusing on the unincorporated areas of Cherokee County, the population in 2010 was 3,286, and 2017 population increased slightly to 3,358. While the change is not large, it is unique to have any population growth in rural regions.

Looking to the future, population growth is unlikely. The maximum growth rate is estimated to be -0.1%, which results in a 2040 population of 11,689 – 383 fewer residents compared to 2010. Both the minimum and mean growth rate estimates show population decline by thousands of residents in the same period.

According to 2013-2017 ACS 5-year estimates, the median household income is \$53,998, which is slightly lower than the median household income for the state of Iowa at \$56,570. Cherokee County has a similar proportion of its population living below the poverty level compared to Iowa, at 11.9% and 12% respectively.

The County's proportion of residents that are age 65 or older is high compared to the State, at 22.7%. FEMA identifies this group as a vulnerable population.

<b>Community Characteristics</b>	
Population (2010)	12,072
Unincorporated Population (2010)	3,286
Population (2017)	11,577
Unincorporated Population (2017)	3,358
Total Households	5,227
Median Household Income	\$ 53,998
Median Household Income – Iowa	\$ 56,570

<b>Population Projections</b>			
<i>Year</i>	<i>MIN (Growth Rate = -1.4%)</i>	<i>MEAN (Growth Rate = -0.7%)</i>	<i>MAX (Growth Rate = -0.1%)</i>
2010	12,072	12,072	12,072
2020	10,481	11,293	11,943
2030	9,100	10,564	11,815
2040	7,900	9,882	11,689

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Region</b>
5 years and younger	646	5.6%	6.78%
65 years and older	2,631	22.7%	16.01%
Below the poverty level	1,378	11.9%	12.88%
Living with a disability	1,590	14.2%	12.41%

The County's vulnerable populations may be housed within a senior housing complex, care facility, or hospital. The table below includes known facilities in addition to Cherokee Regional Medical Center and the Mental Health Institute.

Cherokee County Health Care Facilities

<b>Name</b>	<b>Address</b>	<b>City</b>	<b>Assisted Living</b>	<b>Skilled Nursing</b>
Careage Hills	725 N. 2nd St.	Cherokee, IA 51012	No	Yes
Accura Healthcare	921 Riverview Dr	Cherokee, IA 51012	Yes	Yes



Heartland Care Center	604 E. Fenton	Marcus, IA 51035	Yes	Yes
Accura Healthcare	401 W 5th St	Aurelia, IA 51005	No	Yes
Cherokee Specialty Care	1011 N. Roosevelt Ave	Cherokee, IA 51012	No	Yes
The Beck Senior Living Apartments	333 Sioux Valley Dr	Cherokee, IA 51012	Yes	No
The Gardens	1610 Hwy 3	Cherokee		

### *Housing*

Total housing units in Cherokee County is 5,776. Of those, 5,227 are occupied resulting in a 9.5% vacancy rate. Within the category of occupied housing units, 3,981 are owner-occupied, while 1,246 are renter-occupied. Median home value is \$89,200, which is nearly \$50,000 less than the state median home value. Median rent is also lower at \$549 – this is \$191 less than the State.

<b>Housing Characteristics</b>		
<i>Value</i>	<i>Cherokee</i>	<i>Iowa</i>
Median Home Value	\$89,200	\$137,200
Median Rent	\$549	\$740
<i>Availability</i>	<i>Count</i>	<i>Percent</i>
Total Housing Units	5,776	-
Occupied	5,227	90.5%
Owner-occupied	3,981	76.2%
Renter-occupied	1,246	23.8%
Vacant	549	9.5%

### *Income & Economics*

More than 430 businesses operate in Cherokee County. From large manufacturing and ethanol production to small businesses with a single employee, a full range of services and supplies are readily available. The table below communicates the quantity and proportion of employed individuals within each industry. The total employed population of Cherokee County is 5,990. The three leading industries are:

- Education services and health care and social assistance
- Retail trade
- Manufacturing

Employers within the first industry include the various school districts, including the Cherokee Community School District, which is a leading employer in the County. This category also includes healthcare professionals, including employees of Cherokee Mental Health Institute and Cherokee Regional Medical Center.

<b>Industry for the Civilian Employed Population 16 and over</b>		
Civilian employed population (16 and older)	5,990	-
Agriculture, forestry, fishing and hunting, and mining	601	10.0%
Construction	493	8.2%
Manufacturing	908	15.2%
Wholesale trade	246	4.1%
Retail trade	1,032	17.2%
Transportation and warehousing, and utilities	275	4.6%
Information	44	0.7%
Finance and insurance, and real estate and rental and leasing	187	3.1%
Professional, scientific, and management, and administrative and waste management services	147	2.5%
Education services and health care and social assistance	1,407	23.5%
Arts, entertainment, and recreation, and accommodation and food services	208	3.5%
Other services except public administration	232	3.9%
Public administration	210	3.5%

Retail trade accounts for 1.2 percent of the employed population. Grocery stores, including Hy-Vee and Fareway, account for the employment of a large number of these individuals, however most employers are smaller businesses and organizations. The third largest industry, Manufacturing, employs 908 individuals. Agriculture, forestry, fishing and hunting, and mining was also a significant category. Growth in some industries, hog units for example, does not necessarily register within economic development reporting unless it meets a pre-determined level of capacity.

Cherokee County identifies the following as leading employers:

- Hy-Vee Distribution
- Cherokee Regional Medical Center
- Cherokee Mental Health Institute
- Cherokee Community School District

- Civil Commitment Union for Sexual Offenders
- Cherokee County
- RJ Thomas Manufacturing
- Christensen Brothers, Inc.
- City of Cherokee
- American Natural Processors
- Schoon Construction/Warehouse
- First Coop Association (Cherokee)
- Mongan Painting
- Foundation Analytical Labs
- Screenbuilders
- Grundman Hicks Construction
- Cloverleaf Cold Storage
- Haselhoff Construction

Additional notable employers in the county include:

- AgReliant
- Corteva
- Fareway
- Hy-Vee Grocery
- Little Sioux Corn
- Lopez Foods, Inc.
- Marcus Lumber
- Simonsen Industries
- Staples Promotional Products

Wind energy is a rather new industry for the county. Glacier’s Edge Windfarm is planned to host 85 wind turbines by the close of 2019. Occurrence of natural disaster and relative effect on wind turbines is not readily available but it is important to note that Cherokee County will need to address potential impacts as part of future mitigation action.

For consideration in determining the benefit of given mitigation projects, the County’s valuation of assets based on the County’s 2019 insurance policy as shown below.

2019 Valuation of County Assets

Building	\$	13,992,627
Personal Property	\$	1,677,058
EDP - Hardware	\$	1,010,877
EDP - Software	\$	2,200
Misc Property Sched	\$	<u>5,111,366</u>
<b>Total</b>	<b>\$</b>	<b><u>21,794,128</u></b>

It is important to note that county actions are likely to impact more than just county properties/assets. Each project as submitted shall take into account the values assessed to the affected jurisdiction(s) and entities.

### Participation

A meeting regarding the County and its unincorporated areas was first held with then-County Engineer Brandon Billings on December 5, 2018 at the Engineer’s Office. A second meeting was held via conference call on February 20, 2019 including EMA Justin Pritts, County Auditor Kris Glienke, County Supervisors Duane Mummert and Rick Mongan, County Conservation Director Chad Brown, Economic Development Director Bill Anderson, and Sheriff Jerod Clyde. Several follow up communications were conducted via email. Public input was available via display and comment cards at the Cherokee County Fair, Quimby Watermelon Days and at the Congregate Meal Sites in Aurelia and Marcus. Fifteen respondents indicated jurisdictions within Cherokee County as represented. Open period for public input was available online October 28-November 27, 2019. No submitted responses indicated reference to Cherokee County or its jurisdictions.

### Capabilities

County capabilities include a network of agencies and committees that facilitate community planning. In part, coordinated and planned development is organized through the CAEDC. Their plan includes community awareness as well as attention paid to both existing and new industry. With a primary emphasis on awareness, the County is in a position to maximize potential for collaborative projects that include mitigation strategy while growing local business opportunity.

<b><i>Cherokee County Resources</i></b>	
Emergency Management Agency & Programming	Emergency Management Coordinator
	County Recovery Plan
	Local/County Emergency Plan
Law Enforcement	Cherokee County Sheriff’s Office
Regional Hazard Mitigation Plan	
Economic Development Plan	Cherokee Area Economic Development Corporation
Iowa Wetlands and Riparian Areas Conservation Plan	Cherokee County Conservation Board

*Review of Actions Taken*

Since completion of the 2014 Plan, Cherokee County has implemented some actions and strategies that further its resilience in the event of a disaster. Following is the update to Mitigation Actions and Strategies as discussed in the 2014 Plan. Details of the intent of the actions and strategies can be found in Title III, Section D, of this plan. Some strategies may be in progress or planned for coming years. These will be discussed under Section III *Region*, part G and again in jurisdictional discussion when a collaboration is necessary.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* Each community has designated locations. There are no such refuge locations in unincorporated area parks or recreation areas aside from restrooms and shelters. Such structures may protect from extreme heat, rain, and moderate wind. However, they are not rated for tornado safety.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* While the county is interested in smoke detector programs and promoting fire safety, there are not any recurring programs in place now or in recent years.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security procedures have not undergone significant changes in the past five (5) years. Primary equipment improvement have been implemented by way of generators. Permanent generators were installed at the sewer and wastewater plants, the hospital, the state hospital, communications center, sheriff's office and jail. A list is in place providing equipment available from private residents as may be needed by the County. The County does have available mass sheltering with air conditioning for incidents involving extreme heat. Additional equipment for emergency response is not documented under mitigation actions. First responders

participate in training as provided through the LEPC and the Fire Service Training Bureau. Programming is available through the State as well.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* While some jurisdictions may continue to participate in property acquisition opportunities, such practice is neither viable nor necessary at the County level at this time. Immediate drainage concerns are again more pertinent at the jurisdiction level. Riprap has been added at county bridges where needed to stabilize banks and foundations during flooding and high water events. From the perspective of the County, conversations regarding displacement and proper drainage controls should be taking place before any given development is approved. Subdivision regulations are not currently applicable to County parcels, though officials follow the International Building Code for permits passed through their offices. The County, as well as four of its communities, are participants in NFIP and either have in place floodplain regulations or defer to Iowa DNR permitting before local permits are issued. Each jurisdiction has its own guidelines for development, including floodplain regulation where applicable. The Floodplain Map is still in draft stage through the DNR. The county defers to Iowa DNR floodplain development requirements for development in the unincorporated portions of the County. There are not specified areas under county jurisdiction that have been identified as needing improved drainage, nor are there spaces other than already designated parks and recreation areas that should be considered for permanent status as greenspace.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Improvements to access have been implemented by way of bridge improvements throughout the County.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* The County and four of its incorporated communities impacted/potentially impacted by flooding are participants in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Trees Forever and Iowa DNR programs have been implemented throughout the county. The Natural Resource Conservation Service (NRCS) has collaborated for windbreaks. The DNR completed a tree inventory that will be used for population control decisions once results are received. The county has no desire to implement an ordinance regarding trees on behalf of jurisdictions. Regarding education on tree types and planting, a naturalist/forester provides information as applicable. Work as completed in conjunction with Trees Forever does include an education component.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* The County issues alerts based on NOAA red flag or any state or regional-directed warnings. Communication to communities is relayed via social media and radio stations.

**Action 3.1:** Increase public awareness of vulnerability to hazards/education.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The County actively promotes awareness and makes information available. Examples include distribution of brochures as prepared through the LEPC, social media alerts, as well as use and promotion of the Alert Iowa text alert system. All communities in the county have at least one warning siren, whose signals are audible in unincorporated areas surrounding each city boundary. Further communication networks have been established to link emergency management, law enforcement, and the fire department as needed. Communications are connected to the schools as well. Alert Iowa can be customized to the individual receiving the alerts based on locations and warning types of interest. A weather radio-purchase program was implemented and community facilities and schools were offered weather radios. Not all participated. Due to availability of technology as referenced above, a similar program is not expected to be enacted. All noted alert systems and warning sirens include tornado warnings as appropriate.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A snow emergency/snow removal plan, including a phone tree for guiding the line of communication, is in place at the county level involving secondary roads and sheriff's departments.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Currently, there are not any federally recognized or certified storm shelters established within county jurisdiction. Consideration to include such specifications in new facility projects will continue.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*



*Status:* Cherokee County has made improvements in its radio communications systems supporting the Communications Center and its operations. Cable TV interrupt systems and reverse 911 or telephone interrupt systems are typically outside the jurisdiction of a county. However, providers and franchise holders offering services in Cherokee County do include notifications in available services – usually as a standard feature.

### *Risk Assessment*

Cherokee County Flood Hazard maps as produced through the Iowa DNR are in draft stage (<https://ifis.iowafloodcenter.org/ifis/maps/hazard/>). The Land Use and Floodplain map as provided is based on current available information from the DNR and the County. With completion expected within the next year or so, the county may amend its floodplain references within this plan to account for related project planning where details may conflict with the draft presentation. Regardless of mapped depiction of floodways, Cherokee County is intersected diagonally by the Little Sioux River and again to the center of its northern border by its Mill Creek tributary. Development particularly for the cities of Cherokee, Quimby, and Washta is therefore highly subject to flood patterns. Other geographical and weather-based vulnerabilities are consistent with those of the region as a whole.

Ethanol production and transport is a key consideration in determining risk, as are the presence of bulk ammonia tanks outside the cities of Marcus and Aurelia.

The Crossroads of Western Iowa work activity facility in the city of Cherokee is noted to have shelter specifications, though details are not immediately available. School facilities in Cherokee County have designated tornado protocol and refuge areas, though none are certified. In recent years, state programming has enabled the addition of some generators for use by County departments and facilities.

### *Priority Hazards*

Unchanged from the previous County plan, Flooding, Winter Storms, and Thunderstorms (including hail and lightning) are priority hazard concerns for Cherokee County. Not previously an active concern, sinkholes or likely occurrence of sinkholes due to flood-related washout are now a subject for discussion. The avian flu outbreak in 2015 caused Cherokee County some

loss but outcomes resulting in improved means of preventing cross-contamination preclude highlighted focus on this and like hazards. Public input from the Aurelia Congregate Meal Site and Cherokee County Fair emphasize resident concerns about Severe Winter Storms, Extreme Heat, and Tornado/Windstorm activity. In addition to unlikely events of Earthquake and Landslide, minimal concern was assigned to Dam/Levee Failure among respondents.

### Mitigation Actions, Strategies, & Projects

Cherokee County has several road projects listed for consideration in the near future, many of which are increasing in implementation priority due to the accelerated deterioration effects of frequent weather extremes. Among these are collaborative projects with cities, state funded roadways, and watershed improvements.

The ability to maintain function of County operations during and after a hazardous event or disaster is essential to appropriating response. Ideally, the County would like to place a generator on site for the Courthouse and add two (2) trailer-mounted generators to facilitate response throughout the county as needed. In terms of protecting residents, the County supports efforts by school districts to consider the addition of formal or certified tornado safe rooms within respective facilities, particularly in Cherokee High School and Middle School.

Details as available for needed and/or planned Cherokee County projects are included in the Region listing of Mitigation Actions, Strategies, & Projects.

### Jurisdictions

#### 1. Aurelia

##### a. Profile

The city of Aurelia is located close to the eastern border of Cherokee County, just 8 miles southeast of the City of Cherokee. The IA-7 Highway is the main road that goes through the city and connects Aurelia to surrounding communities, running northwest/southeast through the city.

*City Governance & Community Supports*

Aurelia is governed by a 4-person elected council and the Mayor. Offices in addition to Mayor and Council include City Clerk, Deputy City Clerk, and Public Works. City Hall houses the Council chambers, police department, and city staff offices. Aurelia City has a volunteer Fire Department in place. The Department staffs 20 volunteer firefighters with 10 having Emergency Medical Service certifications. The Aurelia Fire Department serves the city and rural surrounding community, approximately 105 sq. miles. The department operates as at EMT level service for medical emergencies.

Additionally, Aurelia pursues economic development with several community partners. Aurelia Economic Development Corporation's (AEDC) mission is to economically promote and sustain the quality of life in Aurelia by assisting local businesses, residents and actively promoting new opportunities to grow the City of Aurelia. Eight Board members lead the AEDC. The Aurelia Commercial Club (ACC) is much like a traditional chamber of commerce with the exception that anyone may be a member. Aurelia Commercial Club's mission is to promote Aurelia's local business, ag industry and the economic and social health of the community. The Friends of Aurelia group is a community organization that contributes to economic development issues in Aurelia.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Aurelia is 1,036. Housing available in 2010 was 447, with 426 occupied. American Community Survey (ACS) data estimates show the 2018 at 964, slightly lower than the 2017 estimate of 968. The 2013-2017 ACS 5-year estimates indicate median household income to be \$64,028 with 13.6% of the population falling below poverty level.

According to 2010 Census data, 5.8% of the population is under 5 years of age. Additionally, about 23.8% of the population is 65 years of age or older. This is higher than both Cherokee County and the state of Iowa.

<b>Community Characteristics</b>	
Population (2010)	1,036
Population (2017)	968

Total Households	527
Median household income	\$64,028
Median household income – Cherokee County	\$53,998

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Cherokee</b>	<b>Iowa</b>
5 years and younger	60	5.8%	5.6%	6.3%
65 years and older	247	23.8%	21.5%	16.0%
Below poverty level	131	13.6%	11.9%	12.0%
Living with a disability	136	14.1%	14.2%	11.6%

With minimal new construction, about 52.37% of Aurelia’s housing stock was built in 1959 or earlier. The median year that a house in Aurelia was built is 1957, which is older than the median year for a house built in the state of Iowa, which is 1966 ([www.usa.com/aurelia-ia-housing.htm](http://www.usa.com/aurelia-ia-housing.htm)).

With minimal new construction, about 69.4% of Aurelia’s housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 527 units with 47 vacant and 10 new construction homes built since 2000. Estimates show twelve mobile homes, 2.3% of the total housing units available.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
<b>Total housing units</b>	<b>527</b>	
Occupied units	480	91.1%
Vacant units	47	8.9%
Mobile Homes	12	2.3%
<b>Age of residential structure</b>		
Built 2000 or later	10	1.9%
Built 1970 – 1999	151	28.7%
Built 1969 or earlier	366	69.4%

### *Leading Employers*

While not hosting a large number of employees, the following businesses operate and have established a necessary presence in Aurelia.

- Alta-Aurelia Community Schools
- Sunset Knoll Care and Rehab Center

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

- City Hall 236 Main St
- Water Tower 236 Main St
- Community Center 235 Main St
- Library 232 Main St
- Electrical Bldg 126 S Main St
- Town Shop 126½ S Main St
- Town Building 115 Myrtle St
- Garbage Shop 114 Myrtle St
- Fire Dept Storage 112 Myrtle
- Fire Station 110 Myrtle St
- City Park (Shelter House, Gazebo) 216 W 4<sup>th</sup> St
- Boy Scout House 216 W 4<sup>th</sup> St (West side)
- Pool Bldg & Equipment Bldg 304 W 4<sup>th</sup> St (bldgs 1 & 2)
- Pump House (@ School bldg. east end of 4<sup>th</sup> St
- Sewer Plant SW ¼ of Section 10 – Pitcher Twp (bldgs 1 – 5)
- Town Storage Hwy 7
- Aurelia Golf Course 601 Valor Rd

Community Supports, Vulnerable Populations, &/or Gathering Locations

- Sunset Knoll Care and Rehab Center, 410 W 5<sup>th</sup> St
- Aurelia Elementary School, 300 Ash St
- Alta-Aurelia Middle School, 300 Ash St
- Heritage Center, 228 Main St
- Martin Area Park, 4579 Martin Access Rd (outside City Limits)

Valuation of City Assets

Total Buildings	\$	4,561,146
Total Personal Property	\$	702,522

Total Property in the Open \$ 1,117,460  
**Combined Total \$ 6,381,128**

**b. Participation**

Communications with the staff of Aurelia through the course of this Plan was maintained through email contact, phone calls and onsite visits. A planning meeting was conducted via telephone on February 20, 2019. City Clerk Barb Messerole served as primary contact and was a direct participant in the planning for Aurelia. Information as presented included information as contributed to by Mayor Gene Suhr, Public Works official Mark Sangwin, and Police Chief Brian Flikeid. Discussion includes comments as provided by the general public through formal and informal public input opportunities. For Aurelia, informal public input was requested through a presentation at the City’s Congregate Meal Site to an audience of eight people on July 9, 2019. Comment cards and a display were left at the Site and later moved over to City Hall for continued opportunity for public involvement. An example of the display board and comment cards is available for review in Appendix B: *Planning Process Documentation*. Ten responses specific to the City of Aurelia were collected.

**c. Community Capabilities**

<b>Planning Documents and Organization Supports</b>	
Comprehensive Plan	Adopted 2018
Builder’s Plan	1993 base plan
Economic Development Plan	Cherokee Area Economic Development Corporation
<b>Policies/Ordinance – adopted 12/26/2018</b>	
Municipal Code of Ordinances	
<ul style="list-style-type: none"> <li>• Floodplain Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Nuisance Ordinance</li> <li>• Debris Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Storm Water Ordinance</li> <li>• Drainage Ordinance</li> <li>• Historic Preservation Ordinance</li> <li>• Zoning Ordinance</li> </ul>
Iowa Wetlands and Riparian Areas Conservation Plan	Cherokee County Conservation Board
	Iowa DNR

<b>Infrastructure and Technology</b>	
<ul style="list-style-type: none"> <li>Warning Siren</li> <li>Generator(s)</li> </ul>	<ul style="list-style-type: none"> <li>Alert Iowa access</li> <li>Community Bulletin Board/Public Posts</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	<i>Zoning Ordinance</i>
Codes Building Site/Design	<i>Building Permits issued by clerk w/Council-approved application</i>
National Flood Insurance Program (NFIP) Participant	<i>CID #190549</i>
Hazard Awareness Program	Cherokee County Hazardous Waste Pick-up
ISO Fire Rating	Aurelia Class 7 and Aurelia FD Class 7/9
Property Acquisition	Case-by-case
Planning/Zoning Boards	Planning and Zoning Commission
Mutual Aid Agreements	Cities of Alta, Peterson, and Galva Service provided to: Cherokee Regional Medical Ctr; Sioux Valley Hospital.
<b>Staff/Department</b>	
Public Works Official	Public Works Director
Emergency Response Team	City Fire and EMS Department
Historic Preservation	Aurelia Heritage Society
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Auxiliary Grashoff McManus American Legion Post 390
Community Organizations	Aurelia Commercial Club Aurelia Economic Development Aurelia Women's Club Friends of Aurelia Public Library Kiwanis Club of Aurelia
<b>Local Funding Availability/Eligibility</b>	
Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specified purpose	
Fees for water, sewer, gas, or electric services	
Incur debt through	<ul style="list-style-type: none"> <li>general obligation bonds</li> <li>private activities</li> <li>special tax bonds</li> </ul>
Withhold spending in hazard prone areas	

*Review of Actions Taken*

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

*Status:* No new renovations or equipment have been put in place to meet this action, however, a single generator is available for use as needed and the City is in possession of a mobile pump to clear sewer ways.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE:* Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.

*Status:* The City has implemented designation of farm fields to the east of the City as an area to remain undeveloped and to be used for education/instructional purposes. The specified farm fields are now designed to drain directly into established wetland habitat, reducing the potentially damaging effects of heavy rain and/or snowmelt.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Adopted in June 2018, the City's Comprehensive Plan serves as a structured guide to planned and projected community and economic development.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.2:** Education on tree types and planting.

*NOTE:* Tree-related actions and strategies were combined for discussion, as each strategy listed in the previous plan is inter-related.

*Status:* Though not formal, the tree population is monitored and necessary measures are taken on an as-needed basis. In lieu of a formal Tree Board, the City benefits from guidance as



provided by a resident with professional knowledge and practical experience in tree plantings and maintenance. This resident advises on tree types and planting locations and has educated the City on necessary maintenance. Both removals and new plantings have been implemented to address expected invasion of Emerald Ash Borer Beetle and anticipated loss of Ash trees. Proactive measures reduce risk of lost soil stabilization, shade, and wind breaks. Active tree plantings in 2019 include the following locations: walking paths along Hwy 7; bordering intentional green space; and in areas being cultivated for improved pollinator presence. An investment cost is not available; however, the City will continue to address a healthy tree population as a mitigation measure.

The Code of Ordinances, adopted 12/2018 includes a Tree ordinance that specifically addresses tree plantings and maintenance in the public right-of-way and types and conditions constituting nuisances (Code of Ordinances of the City of Aurelia, Iowa. Chapter 151 Trees).

The Council has recognized the benefits of a healthy tree population as means of mitigating excess stormwater runoff, soil stabilization, sheltered relief from extreme heat/sun, and as a natural windbreak/barrier.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

*Status:* Indicated as a low priority action in the 2014, Subdivision Regulations were reviewed during the Municipal Code of Ordinances update completed in December 2018.

**Action 2.3.3:** Continue Floodplain Regulations.

*Status:* Floodplain Regulations were reviewed and included in the 2018 Code update. The City will continue to maintain Floodplain Regulations in a manner consistent with actual and potential floodplain coverage as determined by Iowa DNR. To ensure consistency, Floodplain Regulations are noted by reference in the City's Zoning Ordinances.

**Action 2.3.7:** Implement Burning Ban Regulations. Research and develop regulations for burning bans to be implemented during elongated periods of drought or extreme temperatures.

*Status:* Listed as a Medium Priority Action in the 2014 Plan, Aurelia has within their City Code of Ordinances, updated December 2018, the following references to open burn restrictions: Section 105.05 Open Burning Restricted; Section 135.08 – Burning Prohibited; Section 136.15 – Fires or Fuel on Sidewalks.

**Action 3.1.1:** *Increase public awareness of vulnerability to hazards / education.*

*Status:* As referenced above in Action2.3.4, Aurelia has designated wetlands not only as a collector for storm runoff, but also for education purposes. Education includes natural mitigation measures as well as habitat maintenance.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE:* Above actions combined due to nature of intent of actions and strategies as listed.

*Status:* The City has an established plan for addressing primary and emergency access ways in the event of winter storms. Prioritized clearing is further advanced through overnight and winter weather parking restrictions.

During the removal/clearing process, operators note, report and respond as applicable to downed trees/utilities and other event-related hazards.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*Status:* The City and its response teams commit to annual training as required and as deemed necessary due to recent, potential, and current events. The Firefighter’s Association, County Law Enforcement, County emergency Management Agency, the City, and the Region IV LEPC are partners in providing and/or funding training.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Due to the extravagant expense associated with formally recognized tornado shelters, the City has opted away from formally designation of such. Residents are encouraged to identify their specific safe zones and act accordingly in the event of a tornado watch or

warning. One trailer home resident is aware that refuge is available in the basement of the low owner's personal residence. The school has designated refuge locations for when facilities are in use. The Community Center has television and weather band radio as means of public warning systems while the center is being used for private and/or public events.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.7:** Tornado warning system.

*NOTE:* Above actions combined due to nature of intent of actions and strategies as listed.

*Status:* The City has effectively implemented use of social media as means of mass communication with residents in the event of an emergency. An example given is a recent alert about an ammonia spill where the City went through an evacuation process. An in-person network is also routine for emergency notification. In such events, notification is made via rotation through city streets with notifications (evacuation in particular) announced through a mobile PA system. Additional considerations for new actions and strategies are addressed in this Plan update.

Though not necessarily new actions, the following are in place to enhance community-wide communication of pending inclement weather or dangerous conditions:

- Response teams are designated storm watchers and participate in formal reporting procedures for such notifications;
- Aurelia has a warning siren that reaches all residential areas of the City – it is used as a warning to indicate all inclement weather extremes, and is activated through the County Communications Center and is tested monthly.

Communication systems in place do include the newest residential developments in Aurelia.

**Action 4.3.3:** Improve local weather radio service.

*Status:* While this action item is out of the jurisdiction's scope of control, Aurelia has benefitted from countywide improvements to their emergency response communications network. The City does receive text alerts through the County's subscription to Alert Iowa.

**Action 4.3.4:** Cable TV interrupt warning system.

*Status:* While not within control of the Jurisdiction, interrupt service is currently available through the contracted cable franchise provider in Aurelia.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

*Status:* Weather radios have been purchased through previous programs and are in place at key City facilities including the pool.

d. *Risk Assessment*

*Contributing Factors*

In addition to the facilities as provided, Critical Infrastructure to be considered in the event of a natural disaster includes at least one nursing home, a Middle and Elementary School located in one facility, public water intake, water treatment plant, and a pipeline and railroad line known to transport hazardous material(s).

An historical record of events for Cherokee County is detailed in the NOAA Storm Events Database. Notable occurrences specifically affecting Aurelia beginning January 1, 2013 through December 20, 2018 include the following.

<i>Date</i>	<i>Type</i>	<i>Mag</i>	<i>PrD</i>
05/26/2013	Flash Flood		0.00K
05/27/2013	Flash Flood		500.00K
09/19/2014	Thunderstorm Wind	52 kts. EG	0.00K
05/01/2018	Hail	1.50 in.	0.00K
05/01/2018	Hail	1.25 in.	0.00K

[https://www.homelandsecurity.iowa.gov/disasters/disaster\\_proclamations.html](https://www.homelandsecurity.iowa.gov/disasters/disaster_proclamations.html);

<https://www.ncdc.noaa.gov/IPS/sd/sd.html>

*Priority Hazards*

The City recognizes most natural hazards as listed by the State are of a significant level of concern with the following being primary in regard to risk of residents and potential impact on City operations:

- Tornado
- Severe Winter Storms (*including Ice and Extreme Cold*)
- Extreme Heat

Based on public input, the City-determined priorities are consistent with that as submitted by residents, with Extreme Heat being a slightly higher concern than Sever Winter Storms. However, Hazardous Materials incidents are found to be of equal concern as winter storms. This may be a result of a recent ammonia leak resulting in evacuation of most of the City for the period of a few hours in 2019.

The City and survey respondents assessed the following to be minimal or no risk to residents or operations based on likelihood of occurrence, historic record, and absence of contributing factors: Dam/Levee Failure, Earthquake, and Landslide. Topography and geographic location reduce the likelihood of these occurrences.

Human-caused and biological disasters are a recognized concern, especially regarding terrorism and the City's vulnerable populations. With primary industry related to agriculture, Aurelia maintains awareness of potential hazardous materials incidents as demonstrated by way of an ammonia leak in 2019. The local cooperative experienced leakage from a 30,000-gallon tank resulting in community-wide evacuation and Emergency Management response efforts. Standing protocol was implemented and no injuries or fatalities resulted from the incident.

#### e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 2. Cherokee

### a. *Profile*

The City of Cherokee is situated just north and east of center in Cherokee County. It is the County's largest City and serves as the county seat. Two main highways connect the City to neighboring cities in Cherokee and neighboring Counties – US Highway 59 passes through the

middle of the City running north/south bound, and Highway 3 passes along the northern-most border of the City. Additionally, the Little Sioux River is situated near the southern-most border of the City extending north and south of Cherokee County.

*City Governance & Community Supports*

The City of Cherokee is governed by a five-person elected council and Mayor. Offices in addition to Mayor and Council include City Clerk, Deputy City Clerk, Administrator, Wastewater Department, Parks and Recreation, Street Department, and Public Works. The City’s Fire Department consists of 25 volunteer firefighters, two paid driver/dispatchers and a chief. The department provides fire, rescue, and hazardous material services for the City and surrounding rural areas. The Department also maintains several agreements with surrounding communities to assist each other with major incidents or as needed.

Some additional detail on supports available for the City of Cherokee can be found in Section c. *Community Capabilities* later in this Chapter.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of the City of Cherokee is 5,253. Housing available in 2010 was 2,569 with 2,316 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 4,900, significantly lower than the 2017 of 5,018. The 2013-2017 ACS 5-year estimates indicate median household income to be \$45,103 with 18.2% of the population falling below poverty level.

<b>Community Characteristics</b>	
Population (2010)	5,253
Population (2017)	5,018
Total Households	2,316
Median household income	\$45,103

About 73.9% of City’s housing stock was built in 1960-1969 or earlier. The 2013-2017 ACS 5-year estimates show housing availability to be 2,330 units with 158 vacant units and 28 new construction homes built since 2010. There are 59 mobile homes in the City accounting for 2.5% of total housing units.



- Cherokee Community School District      600 W Bluff St
- Cloverleaf Cold Storage                      1530 S 2nd St
- Fareway Food Store                            205 W Bluff St
- Hy-Vee Distribution Center                  1010 Riverview Dr
- Hy-Vee Food Store                            1300 N 2nd St
- Iowa Food Group                              1300 Lake St

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall	416 W Main St
Fire Station	300 W Elm
Law Enforcement Center	239 W. Maple St
Streets Shop (multiple bldgs/equip)	1811 Industrial Rd
Community Center	530 W Bluff St
Library	215 S 2nd St
Cemetery (multiple bldgs/equip)	1601 W Main
Cherokee Regional Airport (multiple bldgs/equip)	1201 S 2nd
Aquatic Center (multiple bldgs./equip)	614 W Bluff
North Water Tower (#1)	Intersection of Hwy 59 & Hwy 3
Hill Street Water Tower (#2)	N 11th & Hill St
MHI Water Tower (#3)	1200 W Cedar Loop
Industrial Water Tower (#4)	1300 S Lake Rd
Industrial Wastewater Plant (multiple bldgs/equip)	1322 S Lake St
Industrial Water Plant (multiple bldgs/equip)	1201 S Lake St
Wastewater Plant (multiple bldgs/equip)	5745 River Rd
Water Plant	746 E Spruce
Siren	1400 N 2nd
Siren	936 Hill St
Central Park Walking Bridge	Central Park
RR Bridge	
Well Sites	8 Well & Well House locations
Lift Station - South	136 S 2nd St
Lift Stations - Saratoga	76 Saratoga Ave & E Main St
Sumner Street Lift Station	731 Sumner St



Valley View Lift Station	318 W View
MHI Lift Station	701 River Dr
Lift Station	1540 S 2nd St
Spruce Street Lift Station	996 East Spruce St
Beech Street Lift Station	300 E Beech Street
Lift Station	920 Riverview Dr
Storage (multiple bldgs)	339 W Beech

Community Supports, Vulnerable Populations, &/or Gathering Locations

<i>City Supports &amp; Communications centers</i>	
Chamber of Commerce	201 W Main
Cherokee Area Economic Development	201 W Main
Chronicle Times	111 S 2nd St
KCHE Radio	201 S 5th St
<i>County Facilities in City Limits</i>	
County Offices	520 W Main
Conservation Office	629 River Rd
Engineer's Office	Hwy 3 West
Cherokee County Landfill	1805 Linden St
Sheriff's Office	111 N 5th St
VA Office	228 1/2 W Main St
<i>Education Facilities</i>	
Cherokee Community Schools	600 W Bluff
Cherokee Middle School	200 E Indian St
Roosevelt Elementary School	929 N Roosevelt
Washington High School	600 West Bluff St
ISU Cherokee Co Extension Office	209 Centennial Dr, Suite A
Crossroads of Western Iowa	322 S Lake
Western Iowa Tech Community College	200 Victory Dr
<i>Medical Facilities</i>	
Cherokee Mental Health Institute/CCUSO	1251 W Cedar Loop
Cherokee Regional Medical Center	300 Sioux Valley Dr
<i>Senior and Disabled Housing/Care/Support Facilities</i>	
Countryside Estates	921 Riverview Drive
Cherokee Villa Nursing and Rehab	1011 N Roosevelt

Careage Hills Nursing Home	725 N 2nd St
The Gardens	1610 Hwy 3
The Beck (Senior Housing)	333 Sioux Valley Dr
<i>Recreation/Cultural Facilities</i>	
Cherokee County Fairgrounds	200 Linden
American Theaters	108 E Main St
Cherokee Community Theater	530 W Bluff St
Cherokee Symphony	530 W Bluff St
Sanford Museum and Planetarium	117 E Willow St
Cherokee Depot	119 S 4th St, Ste. 6
Westcott Ball Park	Highway 59 South
Spring Lake Yacht Club	606 Spring Lake Dr
Koser Spring Lake Park and Campground	808 Spring Lake Dr
Cherokee Country Club	800 N 11th
<i>Nearby Parks</i>	
Inkpaduta Canoe Trail	Little Sioux River
Pilot Rock (Glacial Rock)	South of Cherokee on Highway 59
Poulson Park	Euclid Ave
Treptow Mini-Park	E Main St

*b. Participation*

On December 5, 2018, a meeting for preliminary review of the hazard mitigation plan was held with Armond Rider, Public Works Superintendent for the City of Cherokee. There was general discussion about City projects and mitigation needs. An information packet including FEMA worksheets was dropped off at the City offices. A formal planning meeting for the City of Cherokee was held via phone conference on February 22, 2019. An example of planning documentation provided to each jurisdiction is included for review in Appendix B: Planning Documents. Participants in planning meetings and/or contributing to Plan development specific to the City of Cherokee are as follows.

- Diane Cargin                      City of Cherokee City Clerk
- Armond Rider                      City of Cherokee Public Works Superintendent
- Craig Schmidt                      City of Cherokee Mayor
- Justin Pritts                      Cherokee County EMA Coordinator

As a means of improving public comment in light of traditionally low turnout at public comment-specific meetings, the Region planning team determined additional efforts were necessary to capture input during the development of this Plan. The Region team and project coordinator discussed public venues and events with reliably high or consistent participation or attendance. For Cherokee County, a display board requesting public input was on exhibit at the Cherokee County Fair, held annually in the City of Cherokee. Examples of the display board and comment cards are available for review in Appendix B: Planning Process Documentation. All comments collected at the Fair indicated residency in the City of Cherokee by respondents. Data from the collected cards are included in *Section D. Risk Assessment* analyses.

Furthermore, until submission of final draft as reviewed by the State of Iowa Department of Homeland Security to FEMA, public comment and input is included as applicable.

*c. Community Capabilities*

*Capabilities*

<b>Documents/Plans</b>	
Comprehensive Plan	Updated in 2011
Economic Development Plan	Cherokee Area Economic Development Corporation
Land Use Plan	Included in the Comprehensive Plan; Land use addressed in zoning
Flood Mitigation Assistance (FMA) Plan	
<b>Policies/Ordinances - last updated August 2019</b>	
<p>The following are included in the City of Cherokee Municipal Code of Ordinances</p> <ul style="list-style-type: none"> <li>• Zoning Ordinance</li> <li>• Building Code</li> <li>• Floodplain Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> <li>• Drainage Ordinance</li> <li>• Historic Preservation Ordinance</li> <li>• Landscape Ordinance</li> </ul>	
Zoning/Land Use Restrictions	Addressed in Comprehensive Plan and in Zoning Regulations in Code of Ordinances
National Flood Insurance Program (NFIP) Participant	CID #190063
ISO Fire Rating	Class 4

Property Acquisition	Acquisition in flood areas & abandoned property
Planning/Zoning Boards	Planning and Zoning Commission
Tree Trimming Program	City managed in right-of-way and in parks
Mutual Aid Agreements	County-wide 28E Agreement
<b>Staff/Department</b>	
Building Code Official	City Administrator serves in this capacity; Inspections/reviews typically performed by one of two full time firemen
Development Planner	City Administrator serves in this capacity
Emergency Response Team	Cherokee Fire Department
Engineer	Project-based consultation; Primary is Beck Engineering, Cherokee office
Fire Department	Chief: Greg Eaton; 25 Volunteers; dispatch and drivers
Historic Preservation	Historic Preservation Commission
Library	7 Staff members including Director Zach Freking
NFIP Floodplain Administrator	City Administrator serves in this capacity
Parks & Rec	Dept includes director & coordinator
Police Department	Chief: Nate James; 2 Sergeants, 5 officers; 1 admin
Public Works Director ( <i>includes oversight of: Water, Sewer, Storm Sewer, Utility</i> )	
• Streets Dept	• Wastewater Dept
	• Water Dept
<b>Non-Governmental Organizations</b>	
Chamber of Commerce	Executive Director: Julie Hering Kent
Neighborhood Associations	Varied
Veterans Groups	Veterans Affairs
	L.A. Wescott, Post 2253
Community Organizations	Cherokee Rotary Club
	Cherokee Lions Club
	Friends of the Library
<b>Local Funding Availability/Eligibility</b>	
Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specified purpose	
Fees for water, sewer, gas, or electric services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• private activities</li> </ul>

- special tax bonds

Ability to withhold spending in hazard prone areas as development restricted and guided through Floodplain Ordinance and compliance may affect spending allowance

In addition to the charted capabilities, physical implementations also contribute to mitigating loss of life and/or damage to property. The City of Cherokee has effectively addressed recurring flooding issues through completed strategies and projects as outlined in the following Review of Actions taken section. The City has established guidance procedures for new developments and has therefore managed reduction in new, preventable risks and losses.

#### *Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A medium level priority in the 2014 Plan, the City recognizes the Community Center as a designated cooling site during extreme heat events when the facility is open. While not maintaining a published list, City staff will inform residents and visitors of available refuge locations upon request. The City does plan to implement strategic preparedness communications that include advance planning and determination of refuge locations for all emergency conditions specific to one's individual needs.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* The Fire Department has in the past implemented a program making smoke detectors available to all residents. Dates of implementation not available. No such program is currently in place; however, the City supports such efforts and is committed to collaborating with the Fire Department and Public Health to make services and resources available to residents.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

*Status:* The City routinely reviews the viability and security of its procedures and equipment. Some modifications and actions described in other Mitigation Actions completed in recent years (such as acquisition of flood-prone properties) and planned projects (including

relocation of Beech Street Lift Station) are discussed in more detail in Action 2.1.2 and under 2019 Mitigation Actions and Strategies.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* At close of FY2019, 32 properties have been acquired or are in the process of being acquired as means of mitigating future damage and/or loss from flood. Additional properties are in still being monitored for consideration. This action item is included in the listing of current actions and strategies. Acquired properties are primarily dedicated greenspace and recreation areas where periodic flooding does not result in exorbitant expense.

While focus has recently been centered on relocation of residents and structures in the floodplain, review of water retention and/or diversion options are an ongoing consideration and is included in the current project listing. An element of preservation of natural open spaces is also taking place by way of addition of pollinator gardens and native plant species, further establishing native ground cover and therefor soil stabilization.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* Included as a low priority strategy in the 2014 Plan, the City has included in its Capital Improvement Plan the purchase of specific properties that have experienced recurring food damages. Routine review of mitigation options are considered annually within appropriation of City finances.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Flash flooding at County and US roadways is frequent and recurring at US-59 and IA-3. While addressing contributing factors is of interest to the City, mitigation measures are outside its scope of implementation. Therefore, roadway elevations are not under current consideration, The City will continue to communicate with County Roads and IA DOT to

determine workable solution(s). The City has made significant local road repairs and is continuing to do so. The City is also assessing the existing floodway to decrease roadway impacts from flooding and severe weather.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* The City of Cherokee is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The City has implemented and put into action, a plan to address the Emerald Ash Borer Beetle including identifying at risk tree populations, tree removal, and replacement. The maintenance plan in place addresses not only diseased or infested trees, but also a monitoring of the overall health of the general tree population. The City has received, and will continue to seek, funding to support its urban forestation efforts. Residents are encouraged to replace trees that have been removed from private property. Guidance on tree maintenance and restrictions on plantings and planting types is offered in the City Code of Ordinances primarily in Chapter 151 Trees, with right-of-way maintenance touched upon as applicable in several other chapters. (Source: <https://cherokeeiowa.net/code>). Currently, tree maintenance is overseen by the Parks and Recreation Department, replacing what was once a Tree Board.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standardized Subdivision and Floodplain Regulations are in place in the current Code of Ordinances. As Flood map revisions are in process, both may require amended content once review is complete. The City has adopted by reference the International Building Code in recent years.

**Action 3.1:** Increase public awareness of vulnerability to hazards/education.

*Status:* Jurisdiction-level action has not been taken, however brochures for disaster preparedness are available through the County Emergency Management office. Promoting use of existing materials and planning tools is among current strategies to reduce impacts of natural hazard events is included as a Region-wide effort.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The City has a designated emergency route plan to address road clearing post-disaster that includes prioritization based on access to critical facilities. Route assessment includes site checks for potential issues (downed trees, powerlines, etc.).

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The City recognizes tornado refuge locations as in place within Community School District facilities, and offers the Community Center as an informal refuge location. However due to costs associated with certified tornado shelters, the City does not have and is not planning on including such in projected new or renovated facilities. In events of emergency declaration of refuge and/or shelter location, the City will post such availability on their Facebook page and connect interested parties to County Emergency Management Agency information and protocol resources.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.7:** Tornado warning system.



*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Though not necessarily new actions, the following are in place to enhance community-wide communication of pending inclement weather or dangerous conditions. Response teams are designated storm watchers and participate in formal reporting procedures for such notifications. Cherokee has four warning sirens that together reach all residential areas of the City. They are audible out of doors and are used to warn residents of all inclement weather extremes. Sirens are activated through the County Communications Center and are tested monthly.

Communication networks in place since the 2014 Plan was adopted include Alert Iowa and the City's electronic billboard, both expected to have increased usage relating to hazard mitigation. Communications networks in place are accessible by all residents within city limits.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The listed communications improvements actions are not within the municipality's jurisdiction to complete. However, the City has committed to bringing awareness to existing technology-based information resources and has included such as a new action strategy. Local cable and telephone providers do have varying levels of notifications included in service packages. The City benefits from radio communications improvements that are incorporated at the County level.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

*Status:* The Community Center has a weather radio. The City offices are connected to the County radio network, receiving alerts when activated. The Fire and Police Departments' employees and volunteers serve as trained stormwatchers, providing an additional layer of assessment and access to current information.

In 2017, the City of Cherokee identified additional mitigation action necessary for the protection of City and Residential properties and function of critical facilities. At the local level, an amendment was approved and adopted to identify additional City facilities as critical to the function of the City and a strategy to ensure proper equipment is in place to maintain function in the event of a natural disaster induced power outage was included. At the time of preparing this update, the City's application

d. *Risk Assessment*

*Contributing Factors*

In addition to the facilities as provided, Critical Infrastructure to be considered in the event of a natural disaster includes at least one nursing home, a Middle and Elementary School located in one facility, public water intake, water treatment plant, and a pipeline and railroad line known to transport hazardous material(s).

An historical record of events for Cherokee County is detailed in the NOAA Storm Event Database. Notable occurrences specifically affecting the City of Cherokee beginning January 1, 2013 through December 20, 2018 include the following:

<i>Date</i>	<i>Type</i>	<i>Mag</i>	<i>Dth</i>	<i>Inj</i>	<i>PrD</i>	<i>CrD</i>
06/15/2013	Thunderstorm Wind	56 kts EG	0	0	10.00K	0.00K
06/01/2014	Heavy Rain	Not available	0	0	0.00K	0.00K
06/01/2014	Heavy Rain	Not available	0	0	0.00K	0.00K
06/16/2014	Heavy Rain	Not available	0	0	0.00K	0.00K
04/24/2016	Hail ( <i>recorded at Cherokee Municipal Airport</i> )	1.00 in.	0	0	0.00K	0.00K
05/09/2016	Heavy Rain	Not available	0	0	0.00K	0.00K
08/28/2018	Hail	1.00 in.	0	0	0.00K	0.00K
08/28/2018	Hail	1.50 in.	0	0	0.00K	0.00K

*Priority Hazards*

The City recognizes most natural hazards as listed by the State are of a significant level of concern with the following being primary in regard to risk to residents and potential impact on City operations:

- Flooding
- Tornado/Windstorms
- Thunderstorms - Hail/Lightning

As weather cycles tend more toward the extreme, threat of sinkholes is an increased concern for the City, residents and nearby communities compared to 2014 when sinkholes were of no concern. The City assessed the following to be minimal or no risk to its residents or operations based on likelihood of occurrence, historic record, and absence of contributing factors:

- Earthquake

*e. Mitigation Actions & Strategies*

Mitigation actions and strategies identified by the City are consistent with the goals as established for the Region. Projects included in this Plan address maintaining function of operations, communication of existing procedures and new mitigation activity, and encouraging individual accountability for personal safety and protection. Actions are reliant upon collaboration and optimizing potential of existing programs and resources.

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

### 3. Cleghorn

*a. Profile*

The city of Cleghorn lies in the northwest quadrant of Cherokee County. Built on a sloping hill and without active waterways, the City does not have a floodplain within its limits. Edging the south of town is state Highway 3 serving as the main road running east/west and connecting Cleghorn to surrounding cities. Canadian National rail line as operated by Illinois Central Railroad intersects the City diagonally from the west to the southeast. Historically, the railroad brought a great deal of industrial business and growth to the city.

*City Governance & Community Supports*

Cleghorn is governed by a five-person elected council and Mayor. Staffed positions include City Clerk and Public Works official. Fire Rescue and emergency response is coordinated

through the Liberty-Sheridan-Rock Fire Association, which is independent of the City but does receive financial support. The city also contracts with the county for law enforcement and with regional medical and hazardous materials emergency response providers.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Cleghorn is 240. Housing available in 2010 was 113, with 106 occupied. American Community Survey (ACS) data estimates show the population estimate in 2018 at 218, slightly higher than the 2017 estimate of 214. The 2013-2017 ACS 5-year estimates indicate median household income to be \$48,750 with 21% of the population falling below poverty level.

With no new or major construction in the last 9 years, about 92.8% of Cleghorn's housing stock was built in 1979 or earlier. ACS 2013-2017 shows housing availability to be 111 units with 16 unoccupied and no new construction homes build since 2000. Data indicates one mobile home unit out of the 111 total housing units in the city.

Countywide data on household incomes and economic information is provided in the County profile and shows breakdown by community when that information is available. The closure of Taylor Refrigeration and the Marcus-Meriden-Cleghorn East Elementary School in Cleghorn has reduced employment opportunities in Cleghorn city limits. During the compilation of this Plan, the City did not disclose a comprehensive valuation of City assets, total property, property in the open, or personal property. Such valuations will be assessed and included in a project summary should the City pursue funding for pre-disaster mitigation project(s).

For the purpose of cost-benefit considerations, a valuation of the City's assets can compiled based on its insured properties, personal property, and facilities. This value as assessed through the City's insurance provider has not been submitted for reference.

#### *Leading Employers*

The following businesses operate and have established a necessary presence in Cleghorn.

- First Cooperative Association
- Wetherell Manufacturing

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

- City Hall 102 N. Lewis Ave
- Cleghorn Community Center 102 W Grace
- Meriden-Cleghorn Public Library 200 E Grace St
- Post office 110 N Lewis Ave
- Liberty-Sheridan-Rock Fire Department 109 N Lewis Ave
- Cleghorn Central Park Adaline St & Dixon Ct
- City Pump Station W Grace St

**b. Participation**

Contact with Cleghorn began in November 2018. A planning meeting via phone conference took place on March 11, 2019. Participants included SIMPCO project lead and City Clerk, Audra Crocker. Mayor Mick Wetherell, Fire Chief Steven Cronin, and Waterworks Director Justin Frederick contributed to information as provided.

As a means of improving public comment in light of traditionally low turnout at public comment-specific meetings, the Region planning team determined additional efforts were necessary to capture input during the development of this Plan. The Region team and project coordinator discussed public venues and events with reliably high or consistent participation or attendance. For Cherokee County, a display board requesting public input was on exhibit at the Cherokee County Fair, held annually in Cherokee. Examples of the display board and comment cards are available for review in Appendix B: Planning Process Documentation. All comments collected at the Fair indicated residency in the City of Cherokee by respondents. Data from the collected cards are included in *Section d. Risk Assessment* analyses. Comments submitted at available forums near Cleghorn and in Cherokee County did not include specific reference to residence in Cleghorn. Furthermore, until submission of final draft as reviewed by the State of Iowa Department of Homeland Security to FEMA, public comment and input is included as applicable.

**c. Community Capabilities**

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	2005 Community Builder

<b>Policies/Ordinances</b>	
Municipal Code of Ordinances	
<ul style="list-style-type: none"> <li>• Zoning Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Subdivision Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Tree Trimming Ordinance</li> <li>• Nuisance Ordinance</li> <li>• Drainage Ordinance</li> </ul>
Iowa Wetlands and Riparian Areas Conservation Plan	Cherokee County Conservation Board
<b>Programs</b>	
Zoning/Land Use Restrictions	Including in City Code under Zoning Ordinance
Codes Building Site/Design	Building Permits only
ISO Fire Rating	Class 8/9
Property Acquisition	Case-by-case determination
Planning/Zoning Boards	Planning and Zoning Commission
Mutual Aid Agreements	Liberty-Sheridan-Rock Fire Association Fire Department
	County-Wide 28E
<b>Staff/Department</b>	
Public Works Official	Public Works Official for Water/Sewer
Emergency Management Coordinator	Cherokee County EMA
Emergency Response Team	Liberty-Sheridan-Rock Fire Association Fire Department
	County-Wide 28E
<b>Local Funding Availability/Eligibility through following Programs:</b>	
Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, gas, or electric services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• private activities</li> <li>• special tax bonds</li> </ul>
Withhold spending in hazard prone areas as development restricted/guided through Floodplain Ordinance; compliance may affect spending allowance	

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A list of designated locations is not maintained. However, Cleghorn does have informal refuge locations where residents and visitors may seek shelter in severe weather conditions. The Community Center is open for regular use in the mornings for coffee and some standard daytime hours. The Community Center may serve as shelter in extreme heat and tornado/windstorm events, and can be opened during storms.

***Action 1.1.2: Provide smoke detectors to property owners.***

*Status:* The Fire Department has enacted programs in the past to supply Cleghorn residents with smoke/fire detectors, though dates of implementation are not available. Currently, no such program is active.

***Action 2.2.1: Capital Improvements Program.***

*Status:* Cleghorn does include a Capital Improvements Program in its annual budget and it is evaluated on a case-by-case basis. Recent projects have addressed water main breakage and street repairs that are not directly attributed to natural hazards.

***Action 2.2.2: Participation in National Flood Insurance Program.***

***Action 2.3.3: Continue Floodplain Regulations.***

NOTE: Action Items combined due to common characteristics and revision process.

*Status:* Cleghorn does not currently have a designated floodplain; therefore, active participation in NFIP is not practical. Standard floodplain language is included in the City Code.

***Action 2.2.3: Tree Planting Plan.***

***Action 2.2.4: Tree Maintenance Plan.***

***Action 2.3.5: Tree Board.***

***Action 2.3.6: City Ordinance for Trees.***

***Action 3.2: Education on tree types and planting.***

NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.

*Status:* Tree maintenance is addressed in standard language regarding right-of-way in the City Ordinances. In lieu of a Tree Board, City maintenance and Council monitor overall health and condition of trees on City and public lands. When trees are removed, consideration is given at the time to replacement to what will be planted and when.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* City practice is to comply with State and County declarations including postings of bans as placed in effect.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A formal snow removal plan is not in place, however streets are cleared in manner that best addresses emergency responder access and is adjusted according to event outcomes and timing.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Established postings are used for communication of some mitigation awareness measures. One tornado siren located near the center of the City is functional. The County Communication Center sounds the alert as applicable. Increased communications efforts are included in new mitigation actions discussed later in this section.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.



*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

**Status:** The local cable provider does include a local channel for information postings. Community Center coordinator and Fire department have authority to post messages. However, these actions as provided are outside the scope of the jurisdiction and therefore limit its ability to implement them.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Status:** A weather radio is in place at the Community Center.

d. *Risk Assessment*

*Contributing Factors*

In addition to the facilities as provided, Critical Infrastructure to be considered in the event of a natural disaster includes public water intake, water treatment plant, and a pipeline and railroad line known to transport hazardous material(s).

An historical record of events for Cherokee County is detailed under the County Profile and includes countywide implications. Notable occurrences specifically affecting Cleghorn beginning January 1, 2013 through December 20, 2018 are as shown in the table below.

<i>Date</i>	<i>Type</i>	<i>Mag</i>	<i>Dth</i>	<i>Inj</i>	<i>PrD</i>	<i>CrD</i>
06/14/2014	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
06/22/2015	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
07/04/2018	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

*Priority Hazards*

The City recognizes most natural hazards as listed by the State are of a significant level of concern with the following being primary in regard to risk to residents and potential impact on City operations:

- Tornado/Windstorms
- Severe Winter Storms
- Drought

Review of natural disaster events and potential of occurrences initiates periodic consideration of mitigation measures. While no projects are planned at during preparation of this Plan, the City will continue to approach projects in a manner consistent with Region Mitigation Goals as provided.

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

#### 4. Larrabee

a. *Profile*

The city of Larrabee is situated near the northern border of Cherokee County. The city lies south of C-16 and US Hwy 59 runs north/south through the city. One of the County's smaller cities, it occupies 0.12 square miles. Larrabee is served by the Cherokee Community School district and is within the Western Iowa Tech Community College (WITCC) region.

*City Governance & Community Supports*

Larrabee is governed by a five-person elected council and Mayor. Offices in addition to Mayor and Council includes Public Works, a department comprised of part time water/sewer meter reading and maintenance and a mower/snow removal team. Larrabee is on the Cherokee County Rural Water System and local services include C-M-L telephone, cable television, garbage pick-up, and sewer. Larrabee has a Volunteer Fire Department with 11 firefighters and one (1) administrative volunteer.

American Legion Post 0670 is a significant community support, with a notable presence in the community. Larrabee growth and development is supported with local, County, and Region guidance in several plans and documents including County Recovery Plan, SIMPCO Economic Development Plan, and 2040 Transportation Plan. Some additional detail on supports available for the City of Larrabee can be found in *Section c. Community Capabilities* later in this Chapter

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Larrabee is 132. American Community Survey (ACS) data estimates show the population in 2018 back to 132, significantly lower than the 2017 estimate of 178. Housing available in 2010 was 71 units, with 62 occupied. Larrabee has 75% housing stock that was built in 1959 or earlier. ACS 2013-2017 5-year estimates show housing availability to be to be 88 units with two (2) vacant and only one new-construction home built since 2010. The city has three mobile homes. Approximately 10% of housing units are valued at or over \$100,000 and less than 50% valued below \$50,000. Furthermore, the 2013-2017 ACS 5-year estimates indicate median household income to be \$44,375 with 20.2% of the population falling below poverty level.

The City’s 2019 Valuation of Assets including buildings, personal property (as owned by the City), EDP hardware, and miscellaneous scheduled and unscheduled properties is \$722,077. Valuation for all City equipment and vehicles may not be included in this assessment.

*Leading Employers*

The First Cooperative Association Feed Mill first opened in March of 1999 and established a now historical presence. Now operating independently, the Feed Mill and Cooperative remain as key businesses in Larrabee. As a small community in a rural area, the United States Postal Service presence in Larrabee is significant. The Juke Joint Grille is has become an integral element of the community and serves as a gathering place for residents.

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

Larrabee Community Center; Clerk’s Office	101 N Main St
Water Tower	106 N Jordan St
Pump House/Valve Bldg	Cedar & Jordan Streets
Flow Meter	S Main St
Warning Siren	106 N Main St
City Park	adjacent to Community Center

Community Supports, Vulnerable Populations, &/or Gathering Locations

Larrabee United Methodist Church	106 S Church St
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There are no standalone daycare or nursing home facilities in the City, however it can be expected that in-home providers are prevalent. *Community Support* and/or *Gathering Locations* may occur anywhere within the City’s borders. While the included provision may not be an exhaustive list, it is intended to reflect known venues and/or areas where residents and visitors may congregate.

**b. Participation**

A formal planning meeting with the City of Larrabee was conducted on February 13, 2019 via conference call. SIMPCO met with Danette Morgan, City Clerk and information as provided includes input from Mayor Dan James, City maintenance Dick Kelly, and mowing and snow-removal team of Tim Ludwig and Brenda Neffe-Ludwig. As a means of improving public comment in light of traditionally low turnout at public comment-specific meetings, the Region planning team determined additional efforts were necessary to capture input during the development of this Plan. The Region team and project coordinator discussed public venues and events with reliably high or consistent participation or attendance. For Cherokee County, a display board requesting public input was on exhibit at the Cherokee County Fair, held annually in the City of Cherokee. Examples of the display board and comment cards are available for review in Appendix B: Planning Documents. All comments collected at the Fair indicated residency in the City of Cherokee by respondents. Data from the collected cards are included in *Section D. Risk Assessment* analyses. Furthermore, until submission of final draft as reviewed by the State of Iowa Department of Homeland Security to FEMA, public comment and input is included as applicable.

**c. Community Capabilities**

<b><i>Policies/Ordinance</i></b>	
Code of Ordinances	
<ul style="list-style-type: none"> <li>• Tree Trimming Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Storm Water Ordinance</li> <li>• Debris Management Plan</li> </ul>
Iowa Wetlands and Riparian Areas Conservation Plan	<i>Cherokee County Conservation Board</i>
<b><i>Programs</i></b>	
ISO Fire Rating	Larrabee Class 9 and Larrabee FD Class 9/10
Property Acquisition	Case-by-case

Mutual Aid Agreements	28E Agreement with all cities in Cherokee County.
<b>Staff/Department</b>	
Mapping Specialist (GIS)	Cherokee County
Engineer	Consultant used as needed.
Public Works Official	Water Superintendent and Wastewater/Sewer Superintendent
Emergency Management Coordinator	Cherokee County EMA
Emergency Response Team	Larrabee Fire Department
Regional Planning Agencies	Iowa League of Cities
	SIMPCO
<b>Local Funding Availability/Eligibility</b>	
Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for specified purpose	
Fees for water, sewer, gas, or electric services	
Incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Withhold spending in hazard prone areas by way of building permit	

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* Though an official list is not in place, the Community Center is known to residents to offer refuge for extreme temperatures and its basement for use as shelter from tornado when residents or visitors are without another suitable option. To increase understanding of available refuge locations, the City will consider periodic postings informing residents of this availability.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions are combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

**Status:** Security procedures are not currently in need of updating; however, equipment is routinely evaluated to determine if replacement, repair, or an upgrade is needed. Response equipment updates are funded through donations, focused fundraising efforts, and community grants as applicable. Training is available to responders through scheduled certification programs and supported through several programs including but not limited to the LEPC and the Firefighters Association. The Fire Department is well equipped incorporating updated tools, materials, supplies, and technology as available. For its own efforts to maintain function, the City has implemented lift station improvements approved in early 2016.

**Action 2.3.4:** Preserve Natural Open Spaces.

**Status:** The City Park is intentionally designated greenspace. As new development is not part of the immediate future, no additional greenspace is currently being planned.

**Action 2.1.5:** Roadway Elevation and Access.

**Status:** Roadway elevation is not needed in the area, however roadway maintenance by way of potholes and deterioration repairs are implemented as needed to prevent complications during future severe weather events that may increase water runoff.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

**Status:** Larrabee has no formal replanting plan in place, however they conduct tree removal as needed for dead and/or diseased trees and there is potential for implementation of planned replacement with the expected arrival of Emerald Ash Borer Beetle or other infestations. In lieu of a Tree Board, Council will consider replacement in conjunction with

guidance as available through the County Conservancy Board and Iowa DNR to ensure tree population health and stability.

City Ordinances include language addressing trees, primarily as maintenance is required in right-of-way. Certain tree types are prohibited as nuisances in the Ordinances. There is not currently a formal education program available. However, those inquiring may be directed to the City Library, Iowa DNR, and the Cherokee County Conservation Board.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Basic language addressing Subdivision Regulations is included in the City Code. Should a change in local growth and development become high priority, the City will review existing language and determine additional language at that time. Building Standards and Floodplain Regulations are not currently addressed within the City Code. Building standards may be considered by reference in future updates, but this is also not a priority item at the time of completing this Plan. Floodplain regulations are not applicable to Larrabee's current standing within the County floodplain maps.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* The City Code of Ordinances does include language addressing burning policy. Burn bans are followed as administered by the Fire Chief and State Fire Marshal. Modifications as needed will be addressed during schedule code reviews.

**Action 3.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Fire Department volunteers and City Councilmembers subscribe to Alert Iowa to ensure timely notification of pending events via text. The City may consider implementing a formal posting procedure including use of City and Fire Department social media and public notice locations but this has not been identified as a high priority action.

Status:

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

Status: For roadway snow routes, maintenance is contracted with the County for snow removal on emergency routes as well as interior routes. In the event of a snow emergency resulting in stranded motorists or residential evacuation from home, the Community Center is informally designated as the primary refuge location, with the Fire Department serving as a supplemental refuge site as needed. To ensure function at both sites, the City has included the need for power at these sites as a priority consideration in future projects.

**Action 4.2.1:** Identify, design, and develop storm shelters.

Status: Opportunity has not occurred in recent years to implement storm shelter design as an element of project development. However, the City will continue to approach new projects giving consideration to potential mitigation components.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

Status: As a critical component of community resiliency, the City Council and members of the local Fire Department subscribe to Alert Iowa to ensure response team awareness and readiness. The City is considering ways to promote that service to residents in addition to improving their communication forums to relay pertinent information before, during, and after extreme or disastrous events. The City has one warning siren in place that is audible when out of doors within city limits. The siren is operated through the County Communications Center, through whom national, regional, and local alerts can be initiated. Local news networks



provide area updates on weather events and serves as one of the City’s notification formats. Larrabee has benefitted from improvements in weather radio service at the County level. Weather radios are not onsite at critical facilities but will be considered for purchase through funds as made available by the City’s insurance provider.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The actions as stated above are all outside the jurisdictions scope of control, however, local cable TV and telephone providers do have alert system capacity within their services. The cable network has a local calendar and information channel where the City can post updates on events that may include emergency action procedures and follow up.

d. *Risk Assessment*

*Contributing Factors*

Considering the City’s location decidedly outside Cherokee County’s designated floodplain, a surprising number of flooding events have occurred in Larrabee in recent years. Attributed primarily to flash flood conditions, it should be noted that the City is considering action to alleviate the effects of flooding caused by heavy rain and insufficient drainage.

Notable occurrences specifically affecting the Larrabee beginning January 1, 2013 through December 20, 2018 include the following:

<i>Date</i>	<i>Type</i>	<i>Mag</i>	<i>Dth</i>	<i>Inj</i>	<i>PrD</i>	<i>CrD</i>
05/26/2013	Flood		0	0	50.00K	0.00K
08/31/2013	Hail	1.00 in.	0	0	0.00K	0.00K
06/17/2014	Flood		0	0	1.000M	0.00K
10/23/2015	Tornado	EFO	0	0	10.00K	0.00K
04/28/2016	Flood		0	0	0.00K	0.00K
05/01/2016	Flood		0	0	0.00K	0.00K
08/18/2017	Hail	1.00 in	0	0	0.00K	0.00K

08/18/2017	Tornado	EFO	0	0	0.00K	0.00K
04/25/2018	Flood		0	0	0.00K	0.00K
05/15/2018	Flood		0	0	0.00K	0.00K
06/21/2018	Flood		0	0	0.00K	0.00K
07/01/2018	Flood		0	0	0.00K	0.00K
07/04/2018	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
09/20/2018	Flood		0	0	0.00K	0.00K

Please note that the above listed events are as recorded in the NOAA database. Locations as indicated may be at point of occurrence or point of data collection. Therefore, related information may include statistics from extended areas while effects directly on the City of Larrabee may be negligible. Incident details can be found using their Climate Data Online tool at <https://www.ncdc.noaa.gov/stormevents/>.

#### *Priority Hazards*

The City recognizes most natural hazards as listed by the State are of a significant level of concern with the following being primary in regard to risk to residents and potential impact on City operations:

- Flooding – *Flash*
- Tornado/Windstorm
- Sever Winter Storm

Additional concerns specifically addressed include Grass or Wildland Fire and Animal/Crop/Plant Disease. The floodplain nearest Larrabee lies west of the City’s outermost limits resulting in minimal concern of direct river flooding impacts. However, river flooding contributes to ground saturation, further inhibiting effective absorption of excess rain. Flash flooding concerns are significant especially in light of recent and recurring heavy rain episodes. The City has identified projects they have completed to mitigate potential damage due to flash flooding and additional strategies for future consideration. The City recognizes potential for sever damage due to Wildfire as its current water storage capacity may be insufficient for response capacity in the event of a large scale grass or wildland fire. The looming threat of the Emerald Ash Borer beetle is a periodic topic of discussion and remains in consideration with long-term tree removal and planting plans.

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

5. **Marcus**

a. *Profile*

The City of Marcus resides in the northwest region of Iowa, located in the heart of a vast fertile agricultural market in Cherokee County. Marcus is the second largest city in Cherokee County after the City of Cherokee. The intersection of State Highways 3 and 143 is located in the southeast corner of Marcus municipal boundary. There is still a train service across the northern part of Marcus that began in October 1870 and carried passengers and freight from Sioux City to Chicago. The main line of the Canadian National Railroad skirts the north edge of Marcus. Responsible for the movement of goods and commodities, transportation through rail freight is present in Marcus City.

*City Governance & Community Supports*

Marcus is governed by a five-person elected council and Mayor. Additional offices include City Clerk, Police Department, Water/ waste superintendent, street superintendent, economic development, public works, and Chamber of Commerce. The Marcus Fire and Ambulance Rescue Department has 27 volunteer staff. Staff training levels vary and include the following: Twenty-six Emergency Medical Technicians and one in training, twenty-four @ Fire Fighter 1, twelve @ Fire Fighter 2, two fire instructors, and two Emergency Medical Services evaluators.

Significant support entities for the community include American Legion Post 0517, Marcus action Club, Marc-Ettes, MEDCO (Marcus Economic Development Corporation), and Marcus Lions. The last Comprehensive Plan was adopted September 12, 2017.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Marcus is 1,117. Housing available in 2010 was 548, with 494 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 1,061. The 2013-2017 ACS 5-year estimates indicate median household income to be \$53,654 with 7.7% of the population falling below poverty level.

According to 2010 census data, 5.6% of total population is under the age of five (5). About 26.6% of total population are 65 years of age or over. About 74.8% of Marcus’s housing stock was built in 1969 or earlier. Although, ACS 2013-2017 5-year estimates show housing availability to be 596 units with 50 vacant and 18 new construction homes built since 2000. Housing growth not reflected in estimates include a new housing development with lots available in early 2019 and the recent opening of a new apartment complex.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	6,735,958
Personal Property	\$	1,039,276
EDP – Hardware	\$	26,000
Fine Arts	\$	4,430
Miscellaneous Property Scheduled	\$	299,308
Miscellaneous Property Unscheduled	\$	<u>16,480</u>
<b><u>Total</u></b>	<b>\$</b>	<b><u>8,121,452</u></b>

Leading Employers

The City of Marcus and the MMC and RU Community School Districts are notable employers for the community. The following businesses also have established a notable and necessary presence in Marcus:

- AgReliant Genetics, LLC 4765 IA-143.
- Little Sioux Corn Processors (*Ethanol plant*) 4808 F Ave
- Marcus Lumber 409 N Locust St
- Schmillen Construction 4772 C Ave
- Staples Promotional Products 710 IA-143

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall	222 N Main St
Marcus Community Center	319 N Main St
Marcus Public Library	108-110 N Locust St
City Park – Equipment, Structures, & Bldgs	City Park
Swimming Pool (& related bldgs.)	110 S Locust St
City Storage/Garage	611 Railroad
City Storage	501 W Cedar
Pump House/Water Treatment Plant (& related)	409 Hwy 143
Water Tower	Hwy 143
Wastewater Treatment Plant (& related equipment)	Sec 32 Marcus Twp
Senior Center	405 N Main
Lift stations	Golf Course, 490 <sup>th</sup> St;
	Shamrock Rd & Pine St

*Community Supports, Vulnerable Populations, &/or Gathering Locations*

In addition to City facilities as shown and several churches and in-home day care providers, the following are services or venues that may at any given time host a disproportionate amount of population.

- Marcus Fairgrounds, W Fenton St (near Maple St)
- Heartland Care Center
- Marcus-Meriden-Cleghorn Community School District, 400 E. Fenton St
  - o MMC & RU High School (& adjacent baseball fields)
  - o MMC Marcus Elementary School

*b. Participation*

A formal planning meeting with the City of Marcus was conducted by SIMPCO staff at Marcus City Hall Council Chambers on January 9, 2019. Those in attendance included: Mayor Harlan Hanson; City Clerk, Kaitlyn Letsche; and Matt Dreckman, City employee and Fire Department representative. Information as provided includes feedback from additional City staff not present including Brian Flikeid, Police Chief and Doug Dreckman, Waterworks Supervisor.

In addition to a display at the Cherokee County Fair, Marcus was identified as a host location for CAAA’s Congregate Meal Sites. A display board, comment cards, and collection envelope were left on site for several weeks after a brief presentation by the project coordinator on July 26, 2019. The display was collected on October 30, 2019. No comments were submitted through this opportunity. Discussion of Public Input and collection methods is included in the Region portion of this Plan under Plan Development.

c. *Community Capabilities*

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
Urban Revitalization Plan	
<b>Policies/Ordinance</b>	
Code of Ordinances	
<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Hazardous Material Accountability</li> </ul>
Zoning Ordinances	<i>Zoning/Land Use Restrictions</i>
Historic Preservation	<i>Historical Preservation Commission</i>
Iowa Wetlands and Riparian Areas Conservation Plan	<i>Cherokee County Conservation Board</i>
<b>Programs</b>	
Codes Building Site/Design	<i>Building Permits; 2018 Adoption by Reference of Int'l Building Code Standards</i>
ISO Fire Rating	<i>Marcus Class 7 and Marcus FD Class 7/9</i>
Property Acquisition	<i>Case-by-Case</i>
Planning/Zoning Boards	<i>Planning and Zoning Commission</i>
<b>Staff/Department</b>	
Building Code Official	<i>Zoning Administrator serves in this capacity</i>
Mapping Specialist (GIS)	<i>Cherokee County; SIMPCO</i>
Public Works Official	<i>Water/Waste Superintendent</i>
Emergency Management Coordinator	<i>Cherokee County EMA</i>
Emergency Response Team	<i>Marcus Fire Department</i>
Law Enforcement	<i>Marcus Police Department</i>
Historic Preservation	<i>Marcus Historical Society</i>

<b>Non-Governmental Organizations</b>	
Veterans Groups	<i>American Legion Post 0517</i>
Economic Development/Growth	<i>Marcus Chamber of Commerce</i>
	<i>MEDCO (Marcus Economic Development Corporation)</i>
Community Organizations (Lions, Kiwanis, etc.)	<i>Marcus Action Club</i>
	<i>Marc-Ettes</i>
	<i>Marcus Lions</i>
<b>Local Funding Availability/Eligibility</b>	
Fees for water, sewer, gas, or electric services	
Incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• private activities</li> <li>• special tax bonds</li> </ul>
Withhold spending in hazard prone areas	

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* While no printed list is maintained, the post office, library, and City Hall are designated refuge locations for extreme heat conditions. Residents and visitors may use the same locations as refuge from all extreme weather conditions during regular hours of operation. The City will make such sites available leading into (when able), during, and after natural and other hazard events as needed. The Fire Department may also serve as refuge in the event of an emergency.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* City hall is connected to emergency response teams through their handheld radio system. While not able to respond directly, City staff is aware of actions being taken by response teams, as they occur. The Marcus Fire Department attains necessary equipment on an as needed basis. Recent equipment upgrades, repairs and/or replacement include an ATV for access to remote or otherwise inaccessible locations and a generator at the station. Included in discussion by City staff in regard to City equipment, including that to be used by its fire and police departments, are the following: additional safety devices such as body cameras and site monitoring; radar capabilities; improved technology; longer-range defense mechanisms; and snow removal equipment assessment to determine additional needs. Additional needs are included in the new actions, strategies, and projects section. Training for emergency responders is available through multiple channels including but not limited to local, Region IV LEPC, and Firefighter Association funds. The law enforcement and firefighting teams attain annual training as required, with consideration given to new modes of available training through multiple providers. The City has participated in Active Shooter training and plans to continue assessing security measures regularly.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.1.5:** Roadway elevation and access.

**Action 2.2.2:** Participation in National Flood Insurance Program.

**Action 2.3.4:** Preserve natural open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Located outside designated floodplains in Cherokee County, Marcus has not identified any properties that should be considered for acquisition as means of restricting development. Areas identified for improved drainage are included in planned project considerations. While roadway elevation is not deemed practical or necessary, access can be improved by use of off-road utility vehicles or ATVs may improve access on impassable roadways. Drainage and greenspace improvements were made at the County Fairgrounds, however details outlining project are not readily available. Roadway access during flash flooding events has not been a pressing concern; however, some potential for a project exists along Railroad Street to reduce impacts of flash flooding. Since Marcus is not included in County designated flood plain,



membership in NFIP offers no significant benefit for residents. The City is committed to monitoring the need for participation.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.2.1:** Capital Improvements Program.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* City projects continue to be assessed on a case-by-case basis and incorporated into the annual budget when need is anticipated. As the City continues its Urban Revitalization Plan process, project presentation for budget approvals may adjust accordingly.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The City has participated in reforestation through Trees Forever for general tree planting projects in the community and has implemented planting projects to enhance area trails. A Tree Board was established during the Trees Forever award process, but is not currently active. The Board provides direction on tree planting and maintenance when related projects are under way and when grants are being pursued. Although aware of regional concerns regarding the Emerald Ash Borer Beetle, the City is not actively pursuing a tree removal/replacement plan. However, handling of dead/diseased/dangerous trees and related removal is, along with maintenance in public right-of-way and private property as applicable, addressed in the city's Municipal Code of Ordinances – Title III, Chapter 5.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* The City is active in reviewing such standards as they may apply to existing and new structures. The City adopted by reference the International Code of Building Standards in 2018.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open Burning is governed by Title III Chapter 15 of the Marcus Municipal Code of Ordinances updated in 2017.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Marcus has an identified priority route for roadway maintenance and snow removal.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Active planning to add a designated tornado shelter to the City's public spaces has not been implemented. However, restrooms at the City Park may be considered for future improvements to include storm shelter-based improvements. The basement at City Hall serves as an informal tornado shelter as needed.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The City uses its designated posting sites for periodic communications with the general public. The City has an active website and Facebook page where residents can find city-issued alerts and information. Marcus participates in regional school/business closings notification systems as provided by news networks. They have recently benefited from improved communications networks, including weather radio networks, at the County level but further improvements in capacity are needed. There are three (3) tornado/warning sirens in Marcus. They are operated through the County Communication Center and are tested monthly. A detailed inspection occurs every spring.

Previous programs have provided weather radios at critical facilities and in school buildings. With implementation of technology-based notification (such as text alerts and internal radio communications), stand-alone weather radios have generally been removed from use. Additional purchase of weather radios is not necessary at this time. The City remains aware of technological failures that may impact text alert systems, however, inclusion in the fire department and emergency services radio communications network meets this intended purpose. Improved local weather radio service, cable TV, and telephone systems capabilities are not within the City's scope of control. Local franchise holders do provide such amenities as alerts in their basic subscription services. The cable provider offers a City updates channel where postings can be submitted for presentation on the "news board".

#### d. *Risk Assessment*

##### *Contributing Factors*

In fall of 2018 through early 2019, the Region experienced a period of higher-than-average precipitation resulting in numerous flooding events. However, Marcus residents reported little more than flash flooding (though some severe) and some basement flooding. Both the flood map of record for Cherokee County and the updated version – the Draft Flood Hazard Map for the County, clearly identify the floodplain to be outside city limits. Therefore, mitigation activity may have more consideration for directed flow of water and drainage rather than road elevations or property acquisitions.

Notable occurrences specifically affecting Marcus beginning January 1, 2013 through December 20, 2018 include the following:

<i>Date</i>	<i>Type</i>	<i>Mag</i>	<i>Dth</i>	<i>Inj</i>	<i>PrD</i>	<i>CrD</i>
06/15/2014	Flood		0	0	0.00K	0.00K
06/16/2014	Flood		0	0	50.00K	0.00K
06/22/2015	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
08/17/2015	Flood		0	0	0.00K	0.00K
05/23/2016	Hail	1.50 in.	0	0	0.00K	0.00K

Please note that the above listed events are as recorded in the NOAA database. Locations as indicated may be at point of occurrence or point of data collection. Incident details can be found using the Climate Data Online tool at <https://www.ncdc.noaa.gov/stormevents/>.

*Priority Hazards*

The City recognizes most natural hazards as listed by the State are of a significant level of concern with the following being primary in regard to risk to residents and potential impact on City operations:

- Tornado/Windstorms
- Severe Winter Weather
- Flash Flooding

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

**6. Meriden**

a. *Profile*

Meriden is located just north of center in Cherokee County. One of the county’s smallest cities, Meriden occupies 0.11 square miles. Situated south of state Highway 3, Canadian National Railroad passes about parallel to the city’s northern boundaries. According to Cherokee County’s city webpage for Meriden, the city was originally named Hazard after a railroad family. The name was changed to Meriden after the locals put in a request to the U.S. Postal Service in 1874 (<https://www.cherokeecountyiowa.com/Towns/Meriden.htm>).

### *City Governance & Community Supports*

Meriden is governed by the Mayor and City Council. Offices in addition include City Clerk, Public Works, and Parks and Recreation. The Meriden Fire Department is independent of the City with 17 volunteer firefighters. The community is very self-sufficient and residents have raised money to construct a fire station/city hall and a multi-purpose community center. The city contracts with the county for law enforcement and has an emergency response team under Meriden Fire and Rescue.

The City of Meriden has a comprehensive plan that was adopted in 2005 by a Community Builder. This plan and additional plans adopted for the city are specified in the discussion of Community Capabilities.

### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Meriden is 159. Housing available was 84, with 77 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 149, slightly lower than the 2017 estimate of 187. The 2013-2017 ACS 5-year estimates indicate median household income to be \$56,875 with 8.6% of the population falling below poverty level.

With minimal new construction, about 50.1% of Meriden's housing stock was built in 1969 or earlier. ACS 2013-2017 estimates how housing availability to be 74 units with three (3) vacant and only two new construction homes built since 2000. Estimates also show six mobile homes in the city, 8.1% of the total housing units available. According to 2010 census data, 6.9% of total population is under the age of five (5). About 16.9% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City's assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	767,190
Personal Property	\$	45,000
EDP – Hardware	\$	15,000
Miscellaneous Property Scheduled	\$	84,663
<b>Total</b>	<b>\$</b>	<b><u>911,853</u></b>

*Leading Employers*

A city’s leading employers is not always a list of the businesses employing the most people. In smaller rural communities, leading employers are key to the function and sustenance of the community’s wellbeing. Following are Meriden’s leading employers.

- Cleghorn-Meriden-Larrabee Telephone
- First Farmers Coop (seasonal)
- Millwright Maintenance
- Whistle Stop Restaurant

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

- City Hall, Fire Department, City Storage Garage 105 Eagle St
- Community Center, Playground 204 Eagle St

**b.** *Participation*

A formal planning meeting with the City was conducted via conference call. City Clerk Bob Morse and former Councilmember Mike Dunn participated with the project coordinator in assessing Meriden’s mitigation actions, strategies, and needs. Dunn also spoke on behalf of the Meriden Fire Department as a former member. Information as provided reflected input from the full Council as well as Mayor DJ Sechler, Fire Chief Beau Menke, and Public Works interim Superintendent Dennis Thorp.

Informal public input opportunity was limited to those attending the Cherokee County Fair. Formal public input was communicated to all jurisdictions through their respective County Board of Supervisor meeting and in all newspaper publications in the region. The open period for public input began October 28 and closed November 27, 2019. The posting as provided for

publication is included in Appendix B: Planning Process Documentation. No respondents indicated Meriden as jurisdiction represented.

c. *Community Capabilities*

*Capabilities*

The City’s ability to remain resilient is enhanced by completion or implementation of projects that have been identified through multiple avenues of planning. Though inactive for at least five (5) years, the City has a Derelict Housing purchase program allowing the City to take ownership of derelict and abandoned houses. The benefit of such program is similar to property acquisition due to recurring flooding – the City assumes responsibility for the property and proceeds in a manner to decrease problems associated with the property under the condition at time of acquisition. Though this action is not intentionally for the purpose of mitigation, residents experience some relief of compounded damages that may otherwise result from unsound structures in high wind, tornado, heavy snow, and/or icy conditions. While development is stagnant, the City has in place mechanisms to support strategic growth and development including: utility access plan for areas currently without connections; retention of a licensed water superintendent, even during transitional periods by way of contracted services; and state of the art technology in their communications networks (as C-M-L Telephone is housed in Meriden). The following chart itemizes Meriden’s collective capabilities as identified in preparation of this Plan.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	2005 Community Builder
<b>Policies/Ordinance</b>	
Municipal Code of Ordinances	
<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Storm Water Ordinance</li> <li>• Drainage Ordinance</li> <li>• Debris Management Plan</li> </ul>
Zoning Ordinance	Zoning/Land Use Restrictions
Building Code	Building plans are brought to Council for approval.
<b>Programs</b>	
ISO Fire Rating	Meriden Class 9 and Meriden FD Class 9/10

Property Acquisition	Case-by-case
Collaborations	
Planning/Zoning Boards	Zoning brought to County P&Z for review in lieu of local Board
<b>Staff/Department</b>	
Public Works Official	<i>Water/Sewer Superintendent (PT)</i>
Emergency Response Team	<i>Meriden Fire and Rescue</i>
<b>Local Funding Availability /Eligibility</b>	
Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for specified purpose	
Fees for water, sewer, gas, or electric services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Withhold spending in hazard prone areas	

Having identified supports either in place or readily available, it is important to include discussion of challenges the City faces in attaining maximum resiliency. The City recognizes the need for trained/certified staff to monitor its permitting processes. The cost for maintaining credentialed staff is cost prohibitive, especially in the current environment of limited growth opportunity. A mixture of contributing factors keeps Meriden at status quo. First, while new housing units are a topic of interest, the relative lack in new structures since 2000 eliminates viable market value data used by banks when issuing loans. No loans, no new development. Since growing families are limited in ability to expand housing options, they move to other communities. Decreased population lowers funding allocations as well as residential taxpayers. Less population leads to reduced staff. Reduced staff means less availability of resources in building not only the community, but its resiliency as well. Fortunately, the City is maintaining contracted support for permitting of waterworks projects and is aware of the factors contributing to current residency stagnation. Their process of identifying concerns become an active problem enables them to sustain regardless of the presented challenges.



In addition to established practices, some actions and strategies were identified in the 2014 Plan for implementation or consideration. In the interest of maintaining only relevant information in the Plan, those actions taken and strategies that have been implemented are identified in this review. When conditions still contribute to the need for action based on an existing or pre-existing condition, those actions and strategies are noted and included in Region Mitigation Actions, Strategies, & Projects in Title III. The full listing of Mitigation Actions and Strategies included in the 2014 Cherokee County Multi-Jurisdictional Hazard Mitigation Plan is provided for consideration in the Region portion of this Plan, Section D.

#### *Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* While no formal list is maintained, the air-conditioned Community Center is typically available for refuge from extreme heat. It is also available to serve as refuge from extreme cold, particularly in the event of a widespread power outage. The Community Center is equipped for connection to a generator in such circumstance. The basement of the Community Center is not a certified tornado shelter; however, it is considered a tornado safe place – providing shelter for those whom will be without otherwise. The City is not currently planning the addition of a certified tornado shelter, however, should the City opt to develop additional City or public properties, mitigation will be an element of planning considerations.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The City may use the generator owned by the Fire Department if such use does not conflict with response efforts as may be required by the FD. The City maintains a network of residents that have committed use of their generators should the City need additional power sources. Both the Community Center and Lagoon have been equipped for connection to a generator in the event of a power outage. Currently, the department and the City are as well equipped as funding allows. Residents and volunteer firefighters offer use of personal equipment as needed for response, namely generators and ATVs (to enable access despite impassible roadways). The Fire Department, independent of the City but receiving support funds, and contracted law enforcement (through Cherokee County) maintain annual training compliance as provided through the Fire Association, Region IV LEPC, and other support associations.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.1.5:** Roadway elevation and access.

**Action 2.2.2:** Participation in National Flood Insurance Program.

**Action 2.3.4:** Preserve natural open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Located outside Cherokee County's designated floodplain, Meriden is not an active participant in NFIP. The City will continue to assess the need for NFIP participation. Flash flooding remains a problem area that includes 12-15 properties and the sewage lagoon. A recent project involved a Public/Private Partnership cost-share for the implementation of a terracing project that reduces water flow rates and contributes to lessening the impact of flash flood events. As this has not alleviated all concerns, new strategies are addressed in Region Section G. Mitigation Actions, Strategies, & Projects. The City is assessing how to address 12-15 properties impacted by flash flooding, though property acquisition is not expected to be the outcome of that assessment. Drainage projects are included for discussion under 2019 Mitigation Actions and Strategies. No City roadways have been considered for potential access concerns or elevation projects.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.2.1:** Capital Improvements Program.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Projects are evaluated by the City on a case-by-case basis I lieu of a formal Capital Improvement Plan. Recent projects include a phased road repair set for completion in 2019. Due to the limited budget flexibility, the City is not in a position to schedule improvements or new projects that are not immediately necessary. However, the City will continue to assess feasibility of new projects in light of necessary mitigation action.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The City has Tree Trimming addressed in its City Code with general reference to right-of-way maintenance and nuisance-related restrictions. There is not a formal Tree Board, nor is there currently a need for one. The City is monitoring need for action regarding the Emerald Ash Borer Beetle but such action is not presently urgent. The Council addresses tree-related queries, but an education format is not in place. City Code-based restrictions address to a limited extent placement of trees and tree varieties. The City responds as needed to resident inquiries.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*Status:* New development is not a pressing concern for the City of Meriden at the time of preparing this Plan. However, the City remains mindful of consistency of permitting standards by contracting qualified systems operators and permit issuers as needed when City departments are vacant. Upon acquiring the vacated school building, the City established

means of necessary utility access plan for plots as purchased. In lieu of a local Zoning Board, development plans are brought before the Cherokee County Planning and Zoning Commission for review. Outside of a designated floodplain for the County, Meriden has not considered implementing Floodplain regulations.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* A local open burn policy has not been implemented, however, the City follows red flag warning and bans as issued by the Fire Chief and State Fire Marshal.

**Action 3.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* C-M-L Telephone places an active role in community notifications and alerts to its subscribers. Additional opportunities for improving awareness are addressed in the Region section of this plan.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The City has a routine in place for snow removal and weather-related parking restrictions.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Meriden is fortunate to be part of the service area for Cleghorn-Meriden-Larrabee Telephone offering cutting edge technology for phone and cable services. Alerts are issued through both services including weather warnings and watches. Meriden has one warning siren sounded by County Communications Center. Warnings can be initiated through the National Weather Service or locally by trained spotters by way of connecting with the Com Center. Weather radios are not readily available at City Hall or the Community Center. However, technology-based alerts have reduced the reliance on weather radio access and frequencies.

d. *Risk Assessment*

*Contributing Factors*

The City lies outside of Cherokee County floodplains as provided in historical data as well as Draft Flood Hazard Maps as provided through the Iowa DNR. River flooding is not a pressing concern however swelling of unnamed waterways, saturation of the groundwater table, and recurring heavy precipitation are compounding impacts of flash flood events. A local interest in installing an improved drainage system is discussed under new Mitigation Actions and Strategies in Section E.

Some recorded weather conditions of note as experienced in Meriden since July of 2013 are shown in the table below.

<i>Date</i>	<i>Type</i>	<i>Mag</i>	<i>Dth</i>	<i>Inj</i>	<i>PrD</i>	<i>CrD</i>
05/11/2014	Hail	1.00 in.	0	0	0.00K	0.00K
06/01/2014	Flash Flood		0	0	0.00K	0.00K

Please note that the above listed events are as recorded in the NOAA database. Locations as indicated may be at point of occurrence or point of data collection. Incident details can be found using the Climate Data Online tool at <https://www.ncdc.noaa.gov/stormevents/>.

*Priority Hazards*

The City recognizes most natural hazards as listed by the State are of a significant level of concern with the following being primary in regard to risk to residents and potential impact on City operations:

- Flash Flooding
- Severe Winter Weather
- Tornado/Windstorms

The City finds that sinkholes, landslides, and earthquakes are least likely to adversely affect City operations.

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 7. Quimby

a. *Profile*

The City of Quimby lies close to the southern border of Cherokee County, and occupies 0.41 square miles. Highway 31 is the main road that connects Quimby to surrounding communities and runs diagonally from the southwest to northeast corners of the city. The Little Sioux River runs along the north side of Quimby. A number of Iowa Century Farms exist in the rural areas around Quimby honoring farmers that have been in the area for 100 years or more.

*City Governance & Community Supports*

Quimby is governed by a five-person elected council and Mayor. Offices in addition to Mayor and Council include City Clerk and Maintenance Director. Quimby City has a volunteer Fire Department in place. The Department staffs 21 members, headed by one Fire Chief. Quimby's Fire and EMS-Ambulance rescue squads are trained and certified in Sioux City and Quimby. The force is made up of seven certified Emergency Medical Technicians and 21 certified fire fighter I.

Community supports in Quimby are American Legion, Auxiliary, and Town & County. These and additional community supports are specified in the discussion of Community Capabilities. A Comprehensive Plan was adopted February 5, 2018.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Quimby is 319. Housing available in 2010 was 152, with 135 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 293, significantly lower than the 2017 estimate of 381. The 2013-2017 ACS 5-year estimates indicate median household income to be \$41,563 with 16.4% of the population falling below poverty level.

According to 2010 Census data, 4.7% of the population is under 5 years of age. Additionally, about 16.4% of the population is 65 years of age or older. This is higher than Cherokee County, but higher than the state of Iowa.

<b>Community Characteristics</b>	
Population (2010)	319
Population (2017)	381
Total Households	168
Median household income	\$41,563
<i>Median household income – Cherokee County</i>	<i>\$53,998</i>

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Cherokee</b>	<b>Iowa</b>
5 years and younger	15	4.7%	5.6%	6.3%
65 years and older	62	19.4%	21.5%	16.0%
Below poverty level	62	16.4%	11.9%	12.0%
Living with a disability	73	19.2%	14.2%	11.6%

With minimal new construction, about 81.4% of Quimby’s housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 193 units with 25 vacant and nine (9) new construction homes built since 2000. Estimates show a total of four mobile homes, 2.1% of the total housing units available.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Occupied units	168	87.0%
Vacant units	25	13.0%
<b>Total housing units</b>	<b>193</b>	<b>100%</b>

Mobile Homes ( <i>portion of total</i> )	4	2.1%
<b>Age of residential structure</b>		
Built 2000 or later	9	4.7%
Built 1970 – 1999	27	14.0%
Build 1969 or earlier	157	81.4%

### *Leading Employers*

The following businesses operate and have established a necessary presence in Quimby.

- Simonson’s Corporate Industries
- Quimby Ag Supply
- City of Quimby
- Deer Valley Mechanical

Additional businesses contributing to the overall wellbeing of the City include several single-employee businesses in addition to Sarge’s Quimby Inn, Quimby Foodmart, Quimby Golf Club, Stevenson Family Tree Service, and the Farm House Restaurant.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

### *2019 Valuation of City Assets*

Building	\$	9,183
Personal Property	\$	4,604
EDP-Hardware	\$	2,122,255
EDP-Software	\$	305,530
Misc Property Sched	\$	57,800
Misc Property Unsched	\$	<u>1,150</u>
<b>Total</b>	<b>\$</b>	<b><u>2,500,522</u></b>



*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

- City Hall 101 E 2<sup>nd</sup> Ave
- Quimby Community Center 9 Main St
- Library 120 N Main St
- City Park Seller St
- City Maintenance Shop 11 Main St
- Lift Station N Clark St
- Water Treatment System/Lagoon C60
- Pump House/Filtration Bldg, etc. Railway Ave
- Warning Siren & Tower Railway Ave
- Water tower Off E 3<sup>rd</sup>
- Quimby Golf Course 1151 Clark

*b. Participation*

Email communications regarding the Hazard Mitigation Plan update began in November 27 2018. SIMPCO conducted a site visit to drop off and discuss planning worksheets December 5, 2018. Linda Sones, City Clerk and Don Fiser, Councilmember and fire department volunteer, are Quimby's designated points of contact for Plan development. The planning meeting with the City of Quimby was conducted on February 8, 2019 via conference call with the following on-site at Quimby City Hall to participate:

Mayor Betty Woltman  
City Clerk Linda Sones  
Councilmembers: Willis Allbaugh  
Don Fiser (also representing Fire Dept)  
Nicole Goettsch  
John Spengler

The City requested a display board and comment cards to receive public input during their Watermelon Days celebration June 28-29, 2019. Additional informal public input opportunity was available at the Cherokee County Fair. No comment cards as submitted indicated Quimby as the jurisdiction represented. Formal input opportunity was made available October 28

through November 27, 2019. Examples of display boards, comment cards and published notifications requesting input are available for review in Appendix \_\_: Record of Participation.

c. *Community Capabilities*

<b>Policies/Ordinances</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Debris Management Plan</li> <li>• Floodplain Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	Zoning Ordinance
National Flood Insurance Program (NFIP) Participant	190354 @ E status
ISO Fire Rating (not updated)	Class 7
<b>Planning/Zoning Boards</b>	
Tree Trimming Program	Mid-American Energy trims trees that are near power lines.
<b>Staff/Department</b>	
Public Works Official	Water Superintendent
Emergency Response Team	Quimby Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion and American Legion Auxiliary
Community Organizations	Town and Country
<b>Local Funding Availabilities &amp; Authorities</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Collect fees for water services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Capabilities*

The City is aware that preparedness is its best means of intervention of the potentially debilitating effects of natural disasters. The northern border of the City is in line with 100-year

floodplain boundaries, with the floodplain overlapping city limits at property developed as the Quimby Golf Course. With minimal structures and flexibility to restrict use in a short period of time, it is an ideal use of that property. Edging the floodplain, flash flooding routinely occurs along IA-31 at Quimby's northeast quadrant. That area is developed for commercial activity by Simonsen Manufacturing. The City is a participant in NFIP as means of access to insurance by that business and property owner. A new well was completed late 2018/early 2019 with additional water and sewer line repair/replacement/improvement needed in the near future. At the time of preparing this Plan, the City was concerned about the impacts of ongoing weather extremes in the sustainability of their existing lines leading to the lagoon. Lines were adversely affected by the flooding of the Little Sioux River in 2018, with continuing weather issues affecting their ability to make repairs.

#### *Review of Actions Taken*

The City of Quimby is aware that systems in place and strategically planned projects are its best means of mitigating the effects of natural and other disasters. Following are actions and strategies implemented or otherwise addressed since their inclusion in the 2014 Plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The City does have some informally designated refuge locations in place. The Community Center is the primary recommended location for shelter during periods of extreme temperatures or other severe weather when persons seeking shelter would otherwise be exposed. Churches in the community offer the same in such conditions. The basements of the Community Center and of several churches provide refuge from tornado and high wind events. The Community Center and most churches are available to serve as shelters in the event of mass evacuation/displacement. The City is interested in formal storm shelter designation for the Community Center. This and additional actions still being considered to address shelter availability are included in *Section E Mitigation Actions and Strategies*.

**Action 1.1.2: Provide smoke detectors to property owners.**

*Status:* The Fire Department has a grant-funded smoke detector distribution program in place for Quimby residents, installation included as needed.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Review of security procedures, available equipment, and training is ongoing. The City has assessed the need for generators in the event of power outage due to natural disasters and contributing factors. Facilities are in the process of being readied for conversion to accept a generator hookup, as needed. Annual compliance training for first responders and the fire department is completed through fund-supported agencies including but not limited to the Region IV LEPC and the firefighters' association. Equipment needs are ongoing, however, equipment is added as funding allows. Additional equipment needs and other considerations for security procedures and training is included in *Section E Mitigation Actions and Strategies*.

**Action 2.2.1:** Capital Improvements Program.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The City of Quimby has a developed Capital Improvements Program in place; however, it is not currently in use.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* A recent County Roads project involved raising the road elevation at the site of the bridge located at L51 and C60.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* The City of Quimby acquired a statement confirming participation in NFIP effective June 29, 2015 from Iowa DNR.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The City has in its Code of Ordinances, language addressing the care and maintenance of trees. Contained within is regulation guiding maintenance of trees in the right-of-way and restricted species based on presence of potential nuisance-causing traits. In lieu of a Tree Board, decisions governing removal/planting of trees falls to the Council. There is a tree-planting plan in place; however, no recent action has been implemented. The City is in the process of revising the plan to address presence of ash trees and pending invasion of the Emerald Ash Borer Beetle. To a limited extent, education about trees types and planting is addressed within the Ordinances guiding tree maintenance and related restrictions.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* City Ordinances regulating Subdivision and Floodplain development are in place with no current need for revision. The City is considering adopting by reference a set of established building standards as a new mitigation strategy.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* An Open Burning Ordinance is in place restricting related actions to covered and contained units. Furthermore, the City follows County and State-set warnings and restrictions.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Lack of a locally published newspaper limits Quimby's ability to initiate widespread public service announcements in print. However, the City has included messages to residents in utility bills, on its electronic message board and by way of postings at designated public notification post locations. Reference to improved communication efforts Region-wide are included for discussion under the Region section of this Plan.

The City does have an in-town warning siren that is sounded through the County Communications Center and tested monthly. The City can initiate a sounding of the siren through the Communications Center as necessary. City staff have confirmed that the siren is audible at Silver Sioux access 3-4 miles out of town to ensure coverage at that recreation venue. Local volunteer firefighters are also trained storm watchers and provide a local resource for weather updates as applicable.

Weather radios are not currently in place in City facilities, though technology by way of text alerts has deemed them if not unnecessary, at least a non-priority at this time. The City has in the past encouraged subscription to local alert services as available through area news and weather update/notification systems, and will add Alert Iowa registration info in future communications to promote preparedness and awareness.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

**Status:** The City does have snow and roadway access plans in place. Main Street is cleared first, then tributaries based what access point is needed at the time. Downed trees or utilities are generally called in; however, staff does generally conduct a check-through as needed. City staff is assisted by the Fire Department when necessary.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

**Status:** Area telephone and cable services provider Wiatel is continually improving its tech-based options, but such actions are generally outside the scope of Quimby’s jurisdiction. The City will continue to promote technological advances by its local franchises and pursue improved broadband and internet capacity, and cellular services as opportunities allow.

d. *Risk Assessment*

*Contributing Factors*

Frequent flooding of the Little Sioux River and its tributaries in recent years has presented an increase in awareness of the existing floodplain and of flash flooding because of high water tables and saturated soils that would not otherwise be an urgent problem. Set in northwest Iowa, expected weather patterns contribute to the City’s ongoing consideration when assessing future development and project implementation. The following table shows record of reported weather incidents as available through NOAA. A more complete record of recent events of note in and around Quimby can be found in the region overview of such events.

<i>Date</i>	<i>Type</i>	<i>Mag</i>	<i>Dth</i>	<i>Inj</i>	<i>PrD</i>	<i>CrD</i>
05/11/2014	Hail	1.50 in.	0	0	0.00K	0.00K
05/01/2018	Hail	1.50 in.	0	0	0.00K	0.00K

### *Priority Hazards*

The City recognizes most natural hazards as listed by the State are of a significant level of concern with the following being primary in regard to risk to residents and potential impact on City operations:

- Flooding – *Riverine and Flash*
- Tornado/Windstorm
- Severe Winter Weather

Some contributing factors to potential flood situations includes a dry creek bed that acts as a natural drainway during heavy periods of rain and flash flood episodes. At times, this creates flooding along IA-31. Mitigation options at the jurisdiction level along this state roadway are limited; however, it is a consideration for the City when evaluating future development projects. Additional actions implemented in the area are included in *Section C* under *Review of Actions Taken*.

Though previously not on the local radar, sinkholes are an increasing concern due to the combined effects of aging infrastructure that is prone to failure and the recurring effects of extreme weather patterns contributing to heave/frost episodes and forced displacement of impacted sewer, water and utility lines in general.

Through the process of completing its Comprehensive Plan in 2018, and after assessing damages and areas of concern relating to recent weather patterns, the City has identified a set of strategies, actions and some specific projects to mitigate the effects of naturally occurring hazards, and in some cases, human-caused and biological hazards are presented in the next section.

#### *e. Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan



## 8. Washta

### a. *Profile*

The City of Washta is situated near the southern-most border of Cherokee County, and occupies 1.039 square miles. IA-31 is the main highway connecting Washta to surrounding communities, running north/south through the eastern half of its corporate boundaries. The Little Sioux River travels diagonally through its northwest quadrant with the Stratton Creek tributary branching eastward and south. Washta is known as the coldest spot in Iowa when on January 12, 1912, an official temperature of -47° F was recorded.

### *City Governance & Community Supports*

An elected council and the Mayor govern Washta. Offices in addition to Mayor and Council include City Clerk and Public Works. Washta benefits from the services of a 19-member, independently operated volunteer fire department – Washta Fire and Rescue. The city contracts with the county for law enforcement and emergency management coordination. The City is served by the River Valley Community School District and hosts an elementary school facility. Information regarding mitigation actions and strategies for this and all regional public school districts can be found under Title VI: School Districts.

### *Demographics, Housing, & Economics*

Based on 2010 census, the population of Washta is 248. Housing available in 2010 was 123, with 110 occupied American Community Survey (ACS) data estimates show the population in 2018 at 228, significantly higher than that of the census and the 2017 estimate of 186. The 2013-2017 ACS 5-year estimates indicate median household income to be \$42,500 with 14% of the population falling below poverty level.

As an indication of vulnerable populations, Census data also shows 4.4% of the population as under 5 years of age and about 23.7% at 65 years of age or older. This is higher than both County and State measures of the same.

With minimal new construction, about 74% of Washta's Housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 123 units with 29 vacant and 5 new construction homes built since 2000. Estimates show seven mobile homes representing 5.7% of total housing units available.



for open comment (October 28, 2019 – November 27, 2019), published in all newspapers serving the Region and at the County Board of Supervisor’s meeting on October 22, 2019. No comments submitted referenced Washta as jurisdiction represented in responses.

**Please note that the City of Washta actively participated in the development of this Plan. However, as the City has 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.**

c. *Community Capabilities*

*Capabilities*

Jurisdictions participating in this Plan have the benefit of access to all Region and County resources and capabilities as provided in respective sections. Local capabilities are provided in the following table.

<b>Plans/Guidance Documents, Policies</b>	
Comprehensive Plan	
Municipal Code of Ordinances	
<ul style="list-style-type: none"> <li>• Floodplain Ordinance</li> <li>• Tree Trimming Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> </ul>
Building Permit process w/out adopted building code standards	
<b>Programs</b>	
ISO Fire Rating	Class 7/9
National Flood Insurance Program (NFIP) Participant - CID #190064	
Property Acquisition	Case-by-case
<b>City Staff/Departments</b>	
Public Works Official/Water Superintendent	
Emergency Response Team	Washta Fire and Rescue
Engineer	Consultant on an as needed basis
<b>Local Funding Abilities</b>	
Apply for Community Development Block Grants	
Fund projects through CIP	

Levy taxes for a specific purpose	
Fees for water, sewer, gas, or electric services	
Incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Withhold spending in hazard prone areas on a case-by-case basis	

*Review of Actions Taken*

The City of Washta reported that no projects specifically or indirectly related to hazard mitigation since the completion of the 2014 Plan. Comment related to existing practice is added below as applicable.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 4.2.1:** Identify, design, and develop storm shelters.

NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.

Status: The City does have informal refuge locations known to residents. No formally designated storm shelters are in place, though the City will consider shelter specifications during renovation of existing facilities or addition of new structures.

**Action 1.1.2: Provide smoke detectors to property owners.**

Status: Program is not currently, nor has it recently been, active.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.

*Status:* Modifications to security procedures have not recently been implemented and are not currently needed.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.1.5:** Roadway Elevation and Access.

**Action 2.3.4:** Preserve Natural Open Spaces.

NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.

*Status:* Though some flooding does occur on certain properties during river flooding and flash flood episodes, the City is has not, and is not planning to consider property acquisitions. Projects to improve drainage, including but not limited to roadway elevation and access concerns at IA-31 north of Main St, would benefit from elevation or other supports to reduce effects of flash flooding, however a work plan has not been initiated at the local or state level. Current County Park designation occurs within the Floodplain, preventing development of that area. As mass development is not pending, the City is content with Floodplain Regulations guiding future considerations for development in flood prone areas. Additional designation of greenspace and intentionally undeveloped areas is not deemed necessary at present.

**Action 2.2.1:** Capital Improvements Program.

NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.

*Status:* Washta does have a CIP in place. Projects are submitted on a case-by-case basis.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Washta is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.2:** Education on tree types and planting.

NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.

*Status:* Washta does not have a Tree Planting Plan and has not prioritized the need for one at present. Standard maintenance as it pertains to right-of-way and nuisance avoidance are included in the City Code of Ordinances. In lieu of a Tree Board, the Council makes decision regarding tree plantings and removals as they are brought to the City. A formal process to educate on tree types and plantings is not currently in place, nor has a need for one been determined.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

NOTE: Action Items combined due to common characteristics and revision process.

*Status:* Building standards are not in place for the City of Washta, though permits are required for new or significantly modified structures. A Floodplain Ordinance is included in the City Code. The City will continue to monitor the effectiveness of current practices, policies, and ordinances as they pertain to mitigation actions.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Conditional burning bans as implemented by the Fire Marshal are followed within the city's jurisdiction.

**Action 3.1:** Increase public awareness of vulnerability to hazards / education.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

NOTE: Above actions combined due to nature of intent of actions and strategies as listed.

*Status:* As needed, the City includes notices in utility bill mailings and posts them at designated locations as necessary. There is not an active process in place to further improve interactive communications locally. However, information for accessing Alert Iowa subscription services is available through the County Emergency Management office. Washta has one warning siren with coverage exceeding city limits. Weather radios are not known to be in place at critical facilities; however, emergency response personnel and City staff receive alerts electronically and through their internal radio system. No additional community alert system is in place.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

NOTE: Above actions combined due to nature of intent of actions and strategies as listed.

*Status:* Snow removal and maintenance of snow routes are routine and consistent with accessibility needs in the community. During snow removal, City staff and contracted providers assess need for follow-up by the City regarding downed trees or utilities.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

NOTE: Above actions combined due to nature of intent of actions and strategies as listed.

*Status:* Local weather radio service, cable TV system program availability, and telephone system programming is not determined at the jurisdiction level. However, the primary franchise agreement holders do offer such services as standard in their respective menus of services.

d. *Risk Assessment*

*Contributing Factors*

While floodplain does cover a sizeable portion of Washta’s incorporated boundaries, impacted areas remain undeveloped with a few identifiable residential properties included. The City has experienced recent issues related to flash flooding resulting from a combination of heavy periods of rain and saturated or frozen ground.

<i>Date</i>	<i>Type</i>	<i>Mag</i>	<i>Dth</i>	<i>Inj</i>	<i>PrD</i>	<i>CrD</i>
04/24/2016	Hail	.75 in.	0	0	0.00K	0.00K

*Priority Hazards*

The City recognizes most natural hazards as listed by the State are of a significant level of concern with the following being primary in regard to risk to residents and potential impact on City operations:

- Flooding
- Tornado
- Drought

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

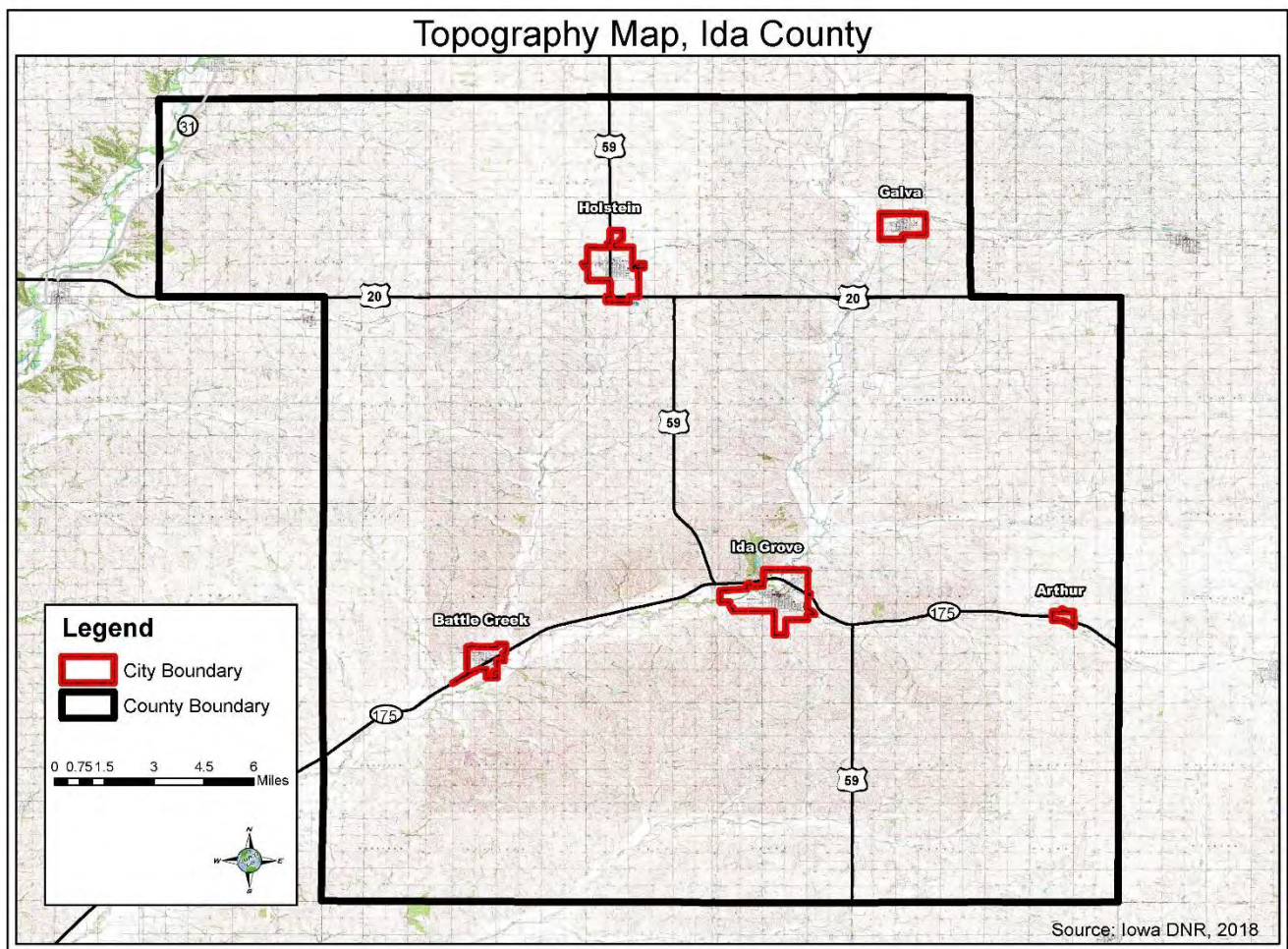


B. Ida

Profile for County & Unincorporated Areas

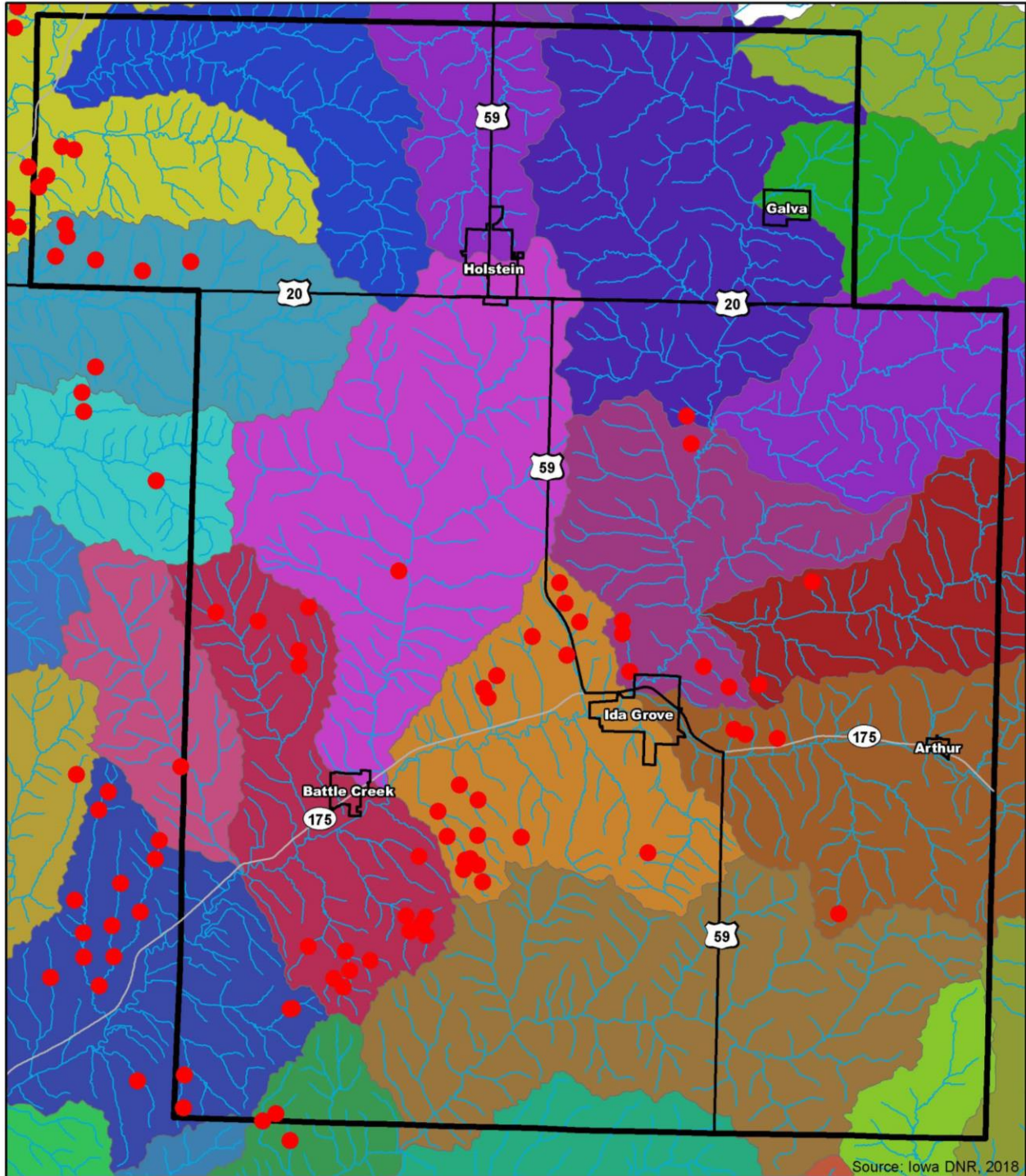
Ida County is located in the south half of the northwest quarter of Iowa. The County is bordered by Cherokee County to the north, Sac County to the east, Crawford County to the south, and Woodbury County to the west. Ida County is approximately 432 square miles.

Cities within Ida County include Arthur, Battle Creek, Galva, Holstein, and Ida Grove.





# Watershed and Water Resource, Ida County



### *Rivers & Watersheds*

The Maple River crosses through the center of the County, while the Little Sioux River crosses briefly into Ida County at the northwest corner. Other rivers include Battle Creek and Soldier River, as well as many smaller creeks and streams.

There are four (4) watersheds within the County that drain storm water and snow melt into streams and lakes, wetland areas, or into groundwater reserves. These watersheds are Blackbird-Soldier Watershed, Little Sioux Watershed, Maple Watershed, and Boyer Watershed. Regional breakdown for watersheds is provided in the *Planning Area* information section. The following map depicts the sub-watersheds within those as listed above. Subwatersheds are determined based on hydrologic unit code (HUC) level 12, which includes more detail including tributary data.

### *Landform Regions & Geology*

Ida County is composed of two (2) distinct landform regions that include Northwest Iowa Plains and Southern Iowa Drift Plain. Both are marked by rolling hills – the result of the manipulation of glacial sediment deposits by glacial melt and streams.

### *Transportation network*

U.S. Highway 20 runs east to west through the northern portion of the County. This highway is intersected by U.S. Highway 59, which runs north to south through the center of the state. The transportation network also includes State Highways 31 and 175.

The County's secondary road system is composed of 731.47 miles. Within this category, Farm-to-Market roads make up 225.58 miles, while Area Service roads account for 505.89 miles. Gravel or earth surface types account for 597.96 miles of the secondary road system. The remaining 124.68 miles are composed of asphalt or PCC surface types.

### *County Governance & Support*

The county seat is located in Ida Grove, near the center of the County. Its jurisdiction covers all unincorporated portions within county boundaries. Ida County is governed by a three (3)-

person Board of Supervisors. The Board serves as the executive and administrative branches of Ida County. Additional Offices include the following departments:

- Assessor
- Auditor
- Clerk of Court
- Conservation
- Emergency Management
- Engineer
- Public Health
- Recorder
- Sheriff
- Treasurer
- Veteran Affairs

The Ida County Emergency Management Agency provides coordination and works in partnerships with local communities, state, and federal agencies. The Ida County Sheriff's Office is the primary law enforcement agency for all of Ida County.

#### *County Facilities*

<b>Critical Facilities</b>	
Courthouse; Misc Equip	401 Moorehead, Ida Grove
Courthouse Annex; Misc Equip	401 Moorehead, Ida Grove
Garage/Shop & Related	1705 W 6th, Ida Grove
Road Mntc/Storage	377 1 <sup>st</sup> , Battle Creek
Roads Storage	323 W Railroad, Holstein
Roads Storage	Hwy M31, Arthur
Engineer's Office/Roads Dept	1705 W 6 <sup>th</sup> , Ida Grove
Landfill Dept Storage	2202 Indian Ave, Ida Grove
Landfill Dept Recycling Bldg & Related	2202 Indian Ave, Ida Grove
Park - Consvr Dept & Related	Sec 10 & 15, Corwin Twp
Park - Consvr Dept & Related	Sec 9 & 10, Garfield Twp

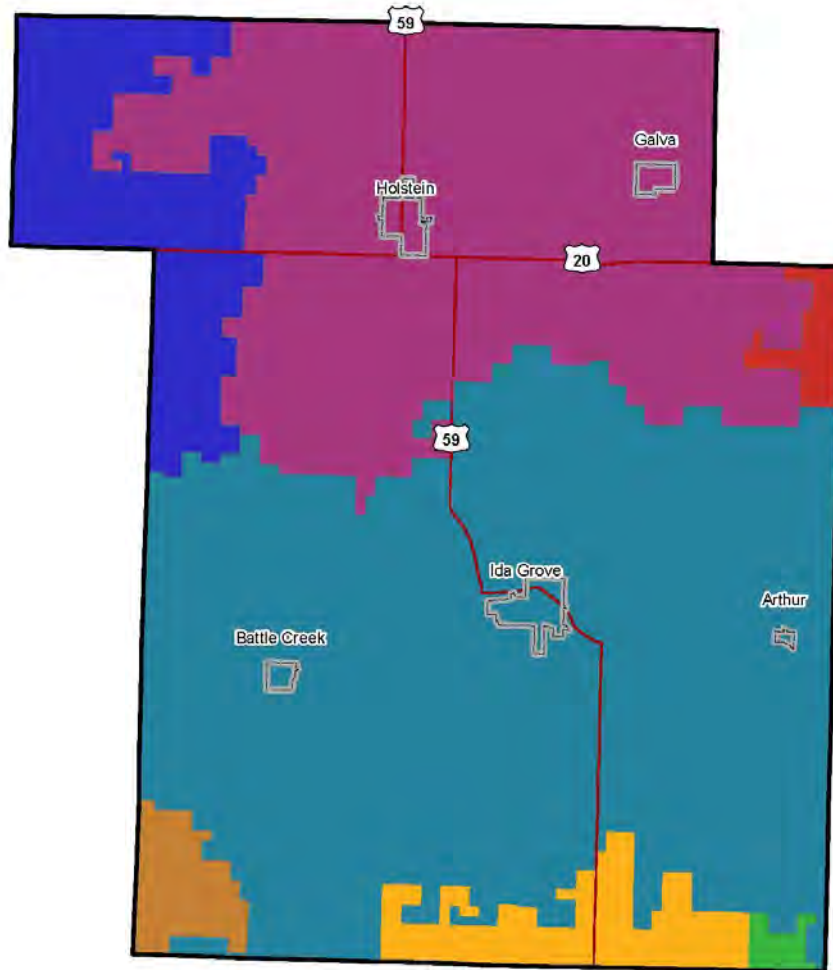
#### *Education*

Within Ida County there are eight (8) public schools divided into two (2) school districts. These districts include:

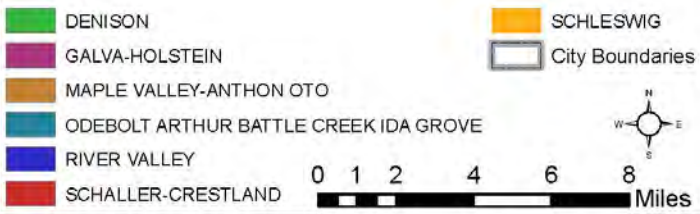
- Galva-Holstein Community School District
- Odebolt-Arthur & Battle Creek-Ida Grove Community School District

There are no colleges or universities within Ida County.

## School Districts, Ida County



### Legend





Ida County has a higher proportion of its population with a high school degree or equivalency compared to the State, at 38.96% and 31.52% respectively. The proportion of individuals with a graduate or professional degree is significantly less than the state average. All other levels of education are generally consistent with the State.

<b>Level of Education</b>	<b>Ida</b>	<b>Iowa</b>
No high school diploma	6.42%	8.16%
High school degree (includes equivalency)	38.96%	31.52%
Some college, no degree	23.13%	21.31%
Associate’s degree	11.76%	11.34%
Bachelor’s degree	16.30%	18.71%
Graduate or professional degree	3.43%	8.97%

*Population*

Based on 2010 census data, the population of Ida County was 7,089. American Community Survey (ACS) data estimates show the 2017 population at 6,965, indicative of a generally stable population with possible decline. Focusing on the unincorporated areas of Ida County, the population in 2010 was 1,982, and 2017 population was slightly to 1,989. This reveals a very slight increase in population within the unincorporated areas of the County. While the change is not large, it is unique to have any population growth in rural regions.

Looking to the future, population growth is unlikely. The maximum growth rate is estimated to be -0.3%, which results in a 2040 population of 6,456 – 543 fewer residents compared to 2010. Both the minimum and mean growth rate estimates show significant population decline in the same time period.

According to 2013-2017 ACS 5-year estimates, the median household income is \$51,578, which is lower than the median household income for the state of Iowa at \$56,570. Ida County has a slightly lower proportion of its population living below the poverty level compared to Iowa, at 10.3% and 12% respectively.

The County’s proportion of residents that are age 65 years and older is high compared to Iowa. Additionally, the proportion of the population living with a disability is also comparatively high. FEMA identifies both of these categories as vulnerable populations.

<b>Community Characteristics</b>	
Population (2010)	7,089
Unincorporated Population (2010)	1,982
Population (2017)	6,965
Unincorporated Population (2017)	1,989
Total Households	3,043
Median Household Income	\$51,978
Median Household Income – Iowa	\$56,570

<b>Population Projections</b>			
Year	MIN (Growth Rate = -1.1%)	MEAN (Growth Rate = -0.6%)	MAX (Growth Rate = -0.3%)
2010	7,089	7,089	7,089
2020	6,344	6,654	6,871
2030	5,678	6,245	6,661
2040	5,091	5,862	6,456

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Region</b>
5 years and younger	418	6.00%	6.78%
65 years and older	1,512	21.70%	16.01%
Below the poverty level	717	10.30%	12.88%
Living with a disability	976	14.30%	12.41%

### *Housing*

Total housing units in Ida County is 3,428. Of those, 3,043 are occupied resulting in an 11.2% vacancy rate. Within the category of occupied housing units, 2,278 are owner-occupied, while 765 are renter-occupied. Median home value is \$91,900, which is \$45,300 less than the state median home value. Median rent is also lower than Iowa at \$453. This is \$287 less than the State.

<b>Housing Characteristics</b>		
	Ida	Iowa
Median Home Value	\$91,900	\$137,200

Median Rent	\$453	\$740
	Count	Percent
Total Housing Units	3,428	-
Occupied	3,043	88.8%
Owner-occupied	2,278	74.9%
Renter-occupied	765	25.1%
Vacant	385	11.2%

*Income & Economics*

The table below communicates the quantity and proportion of employed individuals within each industry. The total employed population of Ida County is 3,533. The three leading industries are:

1. Manufacturing
2. Education services and health care and social assistance
3. Agriculture, forestry, fishing and hunting, and mining

The first and second industry combined employ nearly half of the employed population in Ida County. Employers within the first industry, Manufacturing, include a variety of manufacturing businesses, including Midwest Industries, Quad County Corn Processor, and VT Meats. A major employer within the second industry is Horn Memorial Hospital. Ida County identifies the following businesses and organizations as leading employers for the county:

- Byron Originals, Inc.
- Flint Hills Resources
- GOMACO
- GOMACO Trolley Company
- Hi-Way Products
- Holstein Manufacturing, Inc.
- Horn Memorial Hospital
- Johnson Propane, Heating, and Cooling
- Cylinder Express
- Midwest Industries
- OABCIG Community School District
- Quad County Corn Processors
- Tiefenthaler Quality Meats
- United Bank of Iowa
- VT Industries

<b><i>Industry for the Civilian Employed Population 16 &amp; over</i></b>		
Civilian employed population (16 and older)	3,533	-



Agriculture, forestry, fishing and hunting, and mining	321	9.1%
Construction	195	5.5%
Manufacturing	878	24.9%
Wholesale trade	111	3.1%
Retail trade	301	8.5%
Transportation and warehousing, and utilities	169	4.8%
Information	32	0.9%
Finance and insurance, and real estate and rental and leasing	215	6.1%
Professional, scientific, and management, and administrative and waste management services	84	2.4%
Education services and health care and social assistance	859	24.3%
Arts, entertainment, and recreation, and accommodation and food services	125	3.5%
Other services except public administration	171	4.8%
Public administration	72	2.0%

#### Valuation of County Assets

Building	\$	12,918,991
Personal Property	\$	<u>628,937</u>
<b>Total</b>	<b>\$</b>	<b><u>13,547,928</u></b>

Assets as shown reflect 90% of replacement value as maximum coverage in policy. Projects will use full replacement cost when determining cost-benefit analysis to support funding requests.

#### Participation

A planning meeting was conducted at City Hall in Ida Grove on July 24, 2019 with the following city and county representatives in attendance.

Rhett Leonard	County Supervisor
Ed Sohm	County EMA
Joe Cronin	County Assessor
Jeff Williams	County Engineer
Bob Lorenzen	Parks Superintendent, Ida Grove
Gerrod Sholty	Crew Foreman, Ida Grove

Public input opportunities were in place at the congregate meal sites in Aurelia and Ida Grove. A brief overview on hazard mitigation was presented and a display board and comment cards were left onsite to encourage participation. A comment cards were collected indicating Ida County as respondents' location.

### Capabilities

<b>Plans/Guidance</b>	
Capital Improvement Plan <i>via annual budget process</i>	
Comprehensive Land Use Plan	
Comprehensive Plan	
Critical Facilities Plan (Mitigation/Response/Recovery)	
Flood Mitigation Assistance (FMA) Plan	
Local/County Emergency Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Zoning Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance (including <i>Debris Mgmt Plan</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Floodplain Management Ordinance</li> </ul>
<b>Programs/Commissions</b>	
Historic Preservation Commission	
National Flood Insurance Program (NFIP) Participant	CID #190893
Planning/Zoning Boards	<ul style="list-style-type: none"> <li>• Enterprise Zoning Commission (<i>Inc oversight of Property Acquisition Prog</i>)</li> <li>• Development Planner</li> <li>• Includes oversight of Builder's Plan</li> <li>• NFIP Floodplain Administrator</li> <li>• Zoning/Land Use Restrictions</li> </ul>
<b>Staff/Department</b>	<b>Included responsibility</b>
Emergency Management Coordinator	Hazard Awareness Program
Emergency Response Team	Includes oversight of Emergency Operations Center
Engineer	
Mapping Specialist (GIS)	
Secondary Road Dept	Tree Trimming Program & Compliance
<b>Non-Governmental Organizations</b>	
American Red Cross	
Community Organizations (Lions, Kiwanis, etc.)	

Veterans Groups
<b>Local Funding Availability/Eligibility</b>
Community Development Block Grants
Capital Improvements funding
levy taxes for specified purpose
Fees for water, sewer, gas, or electric services
Impact fees for new development under the Economic Development Commission
Ability to incur debt through <ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is maintained at the County level regarding cooling stations.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* An active smoke detector program is not available through the county. At one time, batteries were available to enable replacement in home smoke detectors. Some programs, including radon detection kits, are sporadically available through Ida County Public Health.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The Conservation board improved security measures at the Nature Center within the past five (5) years. Cameras are in place at the County Courthouse, as are panic buttons. While adequate training opportunities are available, time is an issue for volunteer responders with class time as well as travel. The County has implemented looped waterlines to allow 2-point feed connections, increasing release volume.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The County does not have a property acquisition program. Improvements to high-risk property is not a priority in choosing projects, however, improvements may come as a side effect of non-mitigation focused projects. Projects include ditch maintenance where wash-overs were recurring; north edge of levee @ Maple River channel was silted in; maintenance at overfilled silt control structure north of Moorehead Lake. No greenspace designations have been made in the past five years; no additional locations are currently under consideration.

**Action 2.2.1:** Capital Improvements Program.

*Status:* The County administers funding for Capital Improvements annually through each department's budget hearings and unscheduled work is determined/funded case-by-case.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Projects are completed annually. Many through the Secondary Roads Dept include mitigation measures. Additional projects have been planned and scheduled for completion in 2019. Projects are itemized in annual budget reports as available through the County Auditor. Roadway elevation and access improvements is planned with 10 miles of contracted work.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Ida County does not participate in NFIP. Impacted jurisdictions are members.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The County Conservation Board assumes responsibility for the tree population within the county, including a planting plan and maintenance for tree coverage within the County's jurisdiction, essentially assuming the role of Tree Board. Spraying reduces stray tree growth in ditches. Need for debris removal is monitored when spraying is conducted. Right-of-way maintenance is guided in ordinances. Permit is required for plantings in right-of-way. Maintenance is 50/50 for right-of-way on dirt and gravel roadways. A permit is required for tree plantings within county right-of-way. The Conservation Board provide educational opportunities addressing tree types and plantings.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are determined within city limits per jurisdiction. No current need to develop them at the county level. The county does not actively administer building standards. Proposed floodplain development must be approved through the Iowa DNR before proceeding through county channels. Building permits regulate building standards. Flood plain regulations are guided through the DNR Floodplain Management process, establishing standards for development on impacted lands.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Burn ban regulations are not in place at the County level, though Fire Marshall-issued burn warnings are communicated.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Education about hazards and respective vulnerabilities is available through the County Emergency Mgmt office and the state HSEMD website.

**Action 4.1.1:** Additional equipment for emergency response.

*Status:* New county radio tower @ closed landfill, 2202 Indian Ave; \$350,000; active May 2019. Three (3) county facilities and the main county shop are direct-wired for generator connection.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Additional high capacity snow removal equipment is needed. County Roads has a snow plan in place.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The County would like to add storm shelters in all recreation areas, but local funding is not available. Improvements were made at the Fairgrounds.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* County Emergency Management and the Sheriff's Office assist with communications when events result in County involvement. Local news and media outlets contribute to communications with approved statements as issued. Ida County is a member of Alert Iowa. Storm spotter training is available to aid in recognizing dangerous conditions, and communicating that in a timely manner. A countywide tornado and high wind warning system is in place. Each jurisdiction has at least one siren, though additional may benefit unincorporated areas, particularly near recreation areas. All installed sirens are sounded through the County Communications Center.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* County Communications were improved with the addition of the radio tower as discussed in item 4.1.1. The county does not regulate services as provided through local franchise holders for cable television or telephone services. Providers within Ida County do provide cable TV interrupt alerts and telephone interrupt services.

### Risk Assessment

Different parts of Ida County have been battling flood for the last several years. Infrastructure deterioration accelerated due to runoff and heavier than average flows in waterways. Respondents through public comment indicated Thunderstorm w/Hal & Lightning and Tornado/Windstorm as their greatest concerns, followed by Drought, Extreme Heat, and Severe Winter Storm.

### Priority Hazards

- Tornado/Windstorm
- Severe Winter Storm
- Flood – River and Flash

### Record of Events

A summary of events as recorded in the NOAA Storm Event Database shows 89 events were reported between 11/01/2014 and 10/31/2019 (1826 days). Prominent in occurrence were varying Winter Weather conditions, Thunderstorm Wind, and Hail.

Number of County/Zone areas affected	2		
Number of Days with Event	70		
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	1	\$ 810,000	Flood

Number of Days with Event and Crop Damage	1	\$ 170,000	Flood
Number of Event Types reported	14		

## Jurisdictions

### 1. Arthur

#### a. Profile

The City of Arthur lies on the western-most border of Ida County, and occupies 0.15 square miles. Highway 175 is the main road that connects Arthur to surrounding communities and runs east and west through the city. The city was named after the 21<sup>st</sup> president of the United States of America, Chester A. Arthur.

#### *City Governance & Community Supports*

Arthur is governed by a five-person elected city Council and the Mayor. Offices in addition to Mayor and Council include City Clerk and Superintendent. Arthur City has a volunteer Fire Department in place. The Department staffs 13 members and is independent of the City. The city contracts with the county for law enforcement and emergency management coordinator. The City of Arthur's Mayor is a member of the NFIP program.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Arthur is 206. Housing available in 2010 was 113, with 95 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 194, significantly lower than the 2017 estimate of 258. The 2013-2017 ACS 5-year estimates indicate median household income to be \$46,750 with 4.7% of the population falling below poverty level.

With minimal new construction, about 71.9% of Arthur's housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 128 units with 19 vacant and no new construction homes built since 2000. According to 2010 census data, 6.3% of total population is under the age of five (5). About 21.8% of total population are 65 years of age or over.



For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	1,860,141
Personal Property	\$	176,625
EDP - Hardware	\$	5,000
Fine Arts	\$	3,745
Misc Property Sched	\$	69,970
Misc Property Unsched	\$	<u>110,559</u>
<b>Total</b>	<b>\$</b>	<b><u>2,226,040</u></b>

Leading Employers

The following businesses operate and have established a necessary presence in Arthur.

- Flint Hills Resources (Ethanol Plant)
- Gomaco
- Midwest Industries
- Horn Memorial Hospital

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

Town Hall; Fire Dept; Garage/Supplies	217 Main St
Library	224 S Main
Lift Station	Hwy 175 West
Well House	West End 2nd St
Water Tower	
City Park/Playground/Shelter House	
Recreation area & Related	

b. *Participation*

An on-site planning meeting July 25, 2019 with City Clerk/Administrator Paul Arbegast in attendance. Prior to the meeting, a planning packet was dropped off. Email communication were open throughout the development of the plan.

c. *Community Capabilities*

In addition to County, Region, and State resources, the following table lists out local capabilities to assist in city resiliency.

<b><i>Policies/Ordinance - updated 2017</i></b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Ordinance</li> </ul>
<b><i>Programs</i></b>	
National Flood Insurance Program (NFIP) Participant	Yes, CID #190696
ISO Fire Rating	Arthur - Class 8
Tree Trimming Program	Trim as needed
Mutual Aid Agreements	IMAC (in addition to county & planning region agreements)
<b><i>Staff/Department</i></b>	
NFIP Floodplain Administrator	City Mayor
<b><i>Local Funding Availability</i></b>	
Apply for Community Development Block Grants	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, gas, or electric services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> </ul>

*Review of Actions Taken*

Following is an update of mitigation actions and strategies as laid out in the 2014 county multi-jurisdictional hazard mitigation plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A formal list is not maintained. The Community Center is designated as a refuge location for heat and other emergencies. There is a generator on site in the event of power outage.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program is not in place, nor is one planned for implementation.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Cameras have been installed at the ballpark and dump through an ICAP grant. A dedicated generator was part of the water treatment plant project. The FD seeks funding support for routine equipment replacement and upgrades. Training for first responders is offered through several support programs including but not limited to County, Region, and State resources. Unmet equipment needs have not been reported to the City.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Flooding conditions within city limits do not warrant a large-scale improvement plan or property acquisition program. Drainage conditions are continually monitored, and there is no need for improvements at this time. Adequate natural open spaces are designated in Arthur, primarily in recreational areas.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Local and state roadways are in good condition. Recent projects were completed on M31, leading south into town.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Capital improvements are considered on a case-by-case basis. Projects are brought before Council during the annual budget process, and as needed when urgent projects are necessary.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Arthur is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A Tree Planting Plan is not in place. Ordinances include a chapter on trees and designate responsibility of maintenance, particularly in the public right-of-way. Some restrictions on tree types are included under nuisances. City Council acts on tree-related concerns in lieu of a Tree Board. An education platform on tree types and planting is not available at the city level.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard subdivision regulations are included in the City Code. Formal building standards aside from setbacks are not in place. Building permits are issued through the City

Clerk and approved by Council before construction. Floodplain lies outside the city limits, with the exception of some agricultural property. Therefore, the city does not have a flood plain ordinance.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Yard waste burning is permitted in city limits.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* There is not a formal public awareness program in place regarding hazard awareness and education by the city.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Arthur has few enough streets that a regimented maintenance plan for snow routes is not necessary. Snow-related parking is addressed in the Traffic Code section of the City Code.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No storm shelters have been added in recent years, and none are planned.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city will coordinate communications through the sheriff's department in the event of, and following an emergency. A community warning system is in place by way of a warning siren. Local news stations issue alerts online, television, and via text alert when subscribed.

The siren is sounded for high wind and tornado conditions. It is sounded through County Communications and can be manually sounded by the city. No weather radios are on site in city facilities. The fire department has a pager system for internal communications.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Arthur's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Even with widespread flooding in 2019, the City of Arthur fared well. Drains were kept clear. Heavy rain and rapid snowmelt raised the creek. A pump was run 24 hours/day to prevent it from flowing into the lift station, moving water directly into lagoon cell. Flooding did reach the nearby ethanol plant but no problems occurred in the City. The majority of Arthur's hazard concerns are due to geographic location.

##### *Priority Hazards*

- Tornado/Windstorm
- Flood – primarily flash flooding
- Thunderstorms w/Hail & Lightning

Damages from hail are recurring and costly depending on how widespread damage is. Since July 2014, two hail events are the only reported storms on record in the NOAA database specifically for Arthur. More than 50 events were reported for the Ida County zone, with all but a few related to winter weather. General hazard-related concerns are consistent with those of the region. Earthquake and radiological incidents are not considered as threats.

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 2. Battle Creek

a. *Profile*

The City of Battle Creek is located on the southwestern-most border of Ida County, and occupies 0.50 square miles. Highway 175 is the main road that connects Battle Creek to surrounding communities and runs northeast and southwest through the city. Stories were told of a fierce battle that took place in 1849 between a group of government surveyors and the Sioux Indians on a hill east of the town. The site became known as Battle Hill, and the creek close by and the town took the name Battle Creek. Through the years, many human bones and relics have been found indicating the truth of the battle stories and a stone monument along the highway pays homage to the historical event. In earlier days, the town included several adjacent areas, known as Dinty's Park, Dutch Hollow, Schau Town, and Hell's Bend (<http://battlecreekia.org/about-battle-creek/>).

*City Governance & Community Supports*

Battle Creek is governed by a five-person elected council and the Mayor. Offices in addition to Mayor and council include City Clerk, and Street Superintendent. The Battle Creek Volunteer Fire Department is independent from the City and staffs about 20 volunteers. There is a Battle Creek Fire Department Jr Firefighters program for teens 15 years of age and older. The city contracts with the county for law enforcement and emergency management coordinator.

The City of Battle Creek is a member of the NFIP program, though residents are known to be inactive under flood insurance. The city shares a few plans with the county such as Local/County Emergency Plan and County Recovery Plan. Along with others which are further discussed in the discussion of Community Capabilities.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Battle Creek is 713. Housing available in 2010 was 368, with 325 occupied. American Community Survey (ACS) data estimates show the

population in 2018 at 690, significantly lower than the 2017 estimate of 746. The 2013-2017 ACS 5-year estimates indicate median household income to be \$47,045 with 6.4% of the population falling below poverty level.

With minimal new construction, about 80.9% of Battle Creek’s housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 378 units with 66 vacant and eleven (11) new construction homes built since 2000. According to 2010 census data, 8.6% of total population is under the age of five (5). About 26.8% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Buildings	\$	3,151,240
Personal Property	\$	<u>787,886</u>
<b>Total</b>	<b>\$</b>	<b><u>3,939,126</u></b>

Leading Employers

While not hosting a large number of employees, the following businesses, and those included under Community Supports, operate and have established a necessary presence in Battle Creek:

Willow Dale Wellness Village	404 1st St,
Johnson Propane	960 1st St
Ida Services, Inc (ISI)	651 1st St

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities (including Parks and City Gathering Locations)

Community Center/Library/City Hall	115 Main St
Maintenance/Ambulance Bldg; Storage Shed	408 1st St



Fire Station	Hwy 175 & Ida St
Police Station/Storage	504 1st St
Water Tower	605 7th St
Water Treatment Plant (North Wells)	502 Chestnut
Salt Shed	506 1st St
Storage Shed	403 Clara St
Treatment Plant/East Wells	100 1st St
Lift Station/Lagoon	
Warning Siren	405 1st St
Shelter	3rd & Center
Baseball Field	Hwy 175
Alumni Park	5th & Maple
Shelter House	603 5th St
Pool & Related Equip/Bldgs	Sec 26
East Park	

Community Supports, Vulnerable Populations, and/or Gathering locations

First State Bank	502 2nd St
Christensen-Huffman Funeral Home	608 4th St
Presbyterian Church	600 3rd Street
St. John's Lutheran Church	608 5th Avenue
Fred's Place	106 Main St
Bread Box	104 Main St
BC Bakery	119 Main St
The Inn at Battle Creek (B&B)	201 Maple St
Crawford Creek Recreation Area	Co Rd L51 (Outside city limits)

b. *Participation*

A planning meeting was held July 30, 2019 via conference with City Clerk Diane Lansink. A planning packet was provided prior to the meeting and communications were maintained via email throughout the development of this plan.

c. *Community Capabilities*

IN addition to those as available through the County, Region, and State, the following resources have been put into place to aid Battle Creek in its efforts toward resiliency.

<b><i>Policies/Ordinance</i></b>	
<ul style="list-style-type: none"> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b><i>Programs</i></b>	
National Flood Insurance Program (NFIP) Participant	CID #190432
ISO Fire Rating	Class 6/6X
Planning/Zoning Board	
<b><i>Staff/Department</i></b>	
NFIP Floodplain Administrator	City Mayor
<b><i>Non-Governmental Organizations</i></b>	
Veterans Groups	Legion Post 364
Community Organizations	Lions Club
	Women's Club
	Medical Auxiliary
<b><i>Local Funding Availability</i></b>	
Authority to levy taxes for a specific purpose	
Fees for water & sewer	
Ability to incur debt through general obligation bonds	
Ability to incur debt through special tax bonds	

*Review of Actions Taken*

The following is a status update to actions and strategies as presented in the 2014 county multi-jurisdiction hazard mitigation plan. All items as provided are considered closed unless noted otherwise, and with new related projects included in the listing of Region Actions, Strategies, & Projects included in this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A portable generator was purchased within the last five (5) years or so, a \$20,000 investment. The city benefitted from use of a privately owned drone for assessments during the major flooding event in 2019.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* The FD has had a distribution program in the past, including installation as needed.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security and related equipment updates have not been implemented. Cameras at city parks are currently under consideration. A portable generator was purchased within the last five (5) years or so, a \$20,000 investment. The city benefitted from use of a privately owned drone for assessments during the major flooding event in 2019.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Improvements in drainage were completed near Johnson Propane, involving flow change and channel maintenance. The floodplain has changed with recent updates, so Battle Creek has no need to consider property acquisition programs, nor major improvements. In town parks and trails are maintained in a manner to preserve natural open space. West Park area is intentionally not developed for this purpose.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Roadway elevation projects to improve access have not been considered in the past. This spring was the first occurrence of not being able to use the access road to the lagoon. A project to improve access is not currently being planned.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Capital improvements are determined on a case-by-case basis and included in annual budget planning when possible. Often decisions are made based on recent need/event driving the given project.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Battle Creek is an active NFIP participant.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* No formal Tree Planting Plan is in place. Maintenance is somewhat directed by standard right-of-way and diseased tree provisions within City Ordinances. Plantings are restricted within parking and types of trees are limited as they pertain to nuisance creation. The City Council rules on tree-related issues in lieu of a Tree Board. An ash tree inventory has been completed; no formal plan for removal/replacement has been created. No education on tree types and plantings has been organized by the City.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* The City does not formally reference subdivision regulations. Council addresses economic development as applicable. A Planning & Zoning Committee is in place for permitting only. Floodplain regulations are in place and include an updated floodplain map.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open burning within city limits is banned by ordinance.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* A plan to increase public awareness of hazards has not been implemented. City may use its website to improve awareness and to promote alert systems as available.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Winter parking restrictions are in place, effective November through April and during declared snow emergencies. An informal network guides snow removal and utility checks following storms.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Designated tornado storm shelters are not in consideration as construction is cost prohibitive.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* No action has been taken to improve communications between the City and residents during and after emergencies. However, the city does maintain an active website with timely information and "useful links". Weather radios are not in place at City Hall. City Maintenance and text alerts through the Sheriff's office keeps City Hall up to date on emergency conditions. A tornado siren is in place. It is sounded through County Communications for wind and tornado conditions.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Battle Creek's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Floodplain is primarily to the east and south of city limits with a few structures and agricultural areas affected. Since July 2014, six (6) reported events specific to Battle Creek are recorded in the NOAA Storm Event Database – all related to thunderstorms w/wind, hail, and flood. Loss of power, though not a hazard in itself, is the biggest concern. Flood is also a major concern, along with Wildfire/Grassland Fire.

##### *Priority Hazards*

- Tornado/Windstorm
- Thunderstorm w/ Hail & Lightning
- Severe Winter Weather (with ice as most significant factor)

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

3. Galva

a. *Profile*

The City of Galva is situated on the northeastern-most border of Ida County and occupies 0.71 square miles. The City lies about two miles north of highway 20, which is the main road that connects to neighboring communities and runs east/west.

*City Governance & Community Supports*

Galva is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include City Clerk/Treasurer, Fire Chief, Maintenance Supervisor, and City Attorney. The Galva Volunteer Fire Department is independent from the City and staffs about 22 volunteers. The city contracts with the county for law enforcement and emergency management coordination.

The City of Galva is a member of the NFIP program, though residents are known to be inactive under flood insurance. The city is covered by plans from the county such as Local/County Emergency Plan and County Recovery Plan. Along with others which are further discussed in the discussion of Community Capabilities.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Galva is 434. Housing available in 2010 was 189, with 174 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 418, slightly higher than the 2017 estimate of 381. The 2013-2017 ACS 5-year estimates indicate median household income to be \$44,750 with 9.2% of the population falling below poverty level.

With minimal new construction, about 84.7% of Galva's housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 177 units with 18 vacant and only three (3) new construction homes built since 2000. According to 2010 census data,

9.9% of total population is under the age of five (5). About 17.1% of total population are 65 years of age or over.

2019 Valuation of City Assets

**\$ 2,057,159**

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as assigned represents the assigned max payout, which is typically 90% of the actual replacement cost. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

*Leading Employers*

While not hosting a large number of employees, the following businesses, and those as listed under Community Supports in the table below, operate and have established a necessary presence in Galva.

Quad County Corn Processors	300 E Third St
Rod’s Fertilizer	117 Main St
Galva-Holstein School District	519 E Maple St, Holstein

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall	116 S Main
City Park/Shelter & Equipment	300 Crawford St
Water Pump House #1	107 N Main
Sewage Plant & related	120 N Main
Water Tower	Noll St
Library	203 S Main

Community Support, Vulnerable Populations, &/or Gathering Locations

US Post Office	2nd and Main
Galva-Holstein 3rd-5th Grade School	207 Noll St.
Galva Economic Development Corporation	1681 Market Ave



United Bank of Iowa	102 Main St
St. John's Lutheran Church	406 Monona St
Legion Hall	

*b. Participation*

A planning meeting was conducted with City Clerk Anita Brandt via phone conference on July 25, 2019. A planning packet was delivered prior to the meeting and email communication lines remained open through the development of this plan. In the collection of responses from public input efforts, Galva was not specified under jurisdiction.

*c. Community Capabilities*

In addition to resources as available through County, Region, and State programs, the following are determined and available at the local level.

<b><i>Policies/Ordinance</i></b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b><i>Programs</i></b>	
Planning/Zoning Boards	
Zoning/Land Use Restrictions	
National Flood Insurance Program (NFIP) Participant	CID #190424
ISO Fire Rating	Galva - Class 6; Galva TS FPSA 1 & 2 Class 9/10
Mutual Aid Agreements	IMAC (in addition to County-wide & Regional agreements)
<b><i>Staff/Department</i></b>	
NFIP Floodplain Administrator	role assumed by the City Mayor
<b><i>Non-Government Organizations</i></b>	
Galva Economic Development Corp	
Galva City Committee	
<b><i>Local Funding Availability</i></b>	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, gas, or electric services	

Ability to incur debt through general obligation bonds
Ability to incur debt through special tax bonds
Ability to withhold spending in hazard prone areas

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* City Hall is informally designated as a cooling station during hours of operation.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* Such a program has been conducted in the past by the FD, but is not currently in place.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A review has been conducted and some projects are being discussed regarding secured gate and "Restricted" signage at the sewer plant. Routine trainings are available in nearby communities and periodically in-town. The city is interested in adding communications equipment. Volunteer and standalone training is conducted with own board.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No significant flooding concerns warrant implementation of additional improvements or a property acquisition program. Work was completed on two (2) storm sewers spring 2019.

Areas on 2nd St did experience some flooding, driving continued when road should have been closed. A park area hosts designated green space near the flood zone.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* No action taken on this item. None is planned.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Capital improvements are determined on a case-by-case basis.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Galva is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A Tree Planting Plan and Tree Maintenance Plan are not in place. Action is taken as needed, not requiring a formal procedure for most issues. Some maintenance is guided by standard right-of-way language within city ordinances, specifying obligation. City Council acts on tree-related matters in lieu of a Tree Board. No education programs addressing tree types or planting is offered through the city.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard subdivision regulations are in the city code. No formal reference is made to established building standards. Planning and zoning committee meets for permits, providing guidance and some regulation. Floodplain regulation is included in the city code.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* The city hosts a designated burn site for landscape debris.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* County alerts are transmitted via phone alerts; service is available to all residents.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Roadway snow routes are established and a parking ban is in place November through April. No formal snow plan is in place.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No action has been taken on this item. Refuge is available at the school and there is a basement in the bank.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city website is an active means of routine communications with residents and is expected to be used in collaboration with County Communications Center, local media, and the sheriff's office. Weather radios are not in place at City Hall, but there is interest in having

one or other means of immediate communication readily available. Use of pagers and handheld radio enable communication between responders. A rotating warning siren is in place, audible throughout Galva and beyond city limits.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Galva's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Galva is specified for two storm events as recorded in the NOAA Storm Event Database between July 1, 2014 and October 31, 2019 – both were hail. Prioritized hazards are based on frequency and likelihood of occurrence.

##### *Priority Hazards*

- Thunderstorms w/Hail & Lightning
- Tornado/Windstorm
- Sever Winter Storm

#### e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 4. Holstein

### a. *Profile*

The city of Holstein lies north from center of Ida County, and occupies 1.50 square miles. The City of Holstein remains the second biggest City in Ida County regarding population size and spatial area. U.S. Highways 20 and 59 intersect at the southern portion of the city with US-59 dividing the city into two parts.

#### *City Governance & Community Supports*

Holstein is governed by a five-person elected council and the Mayor. Offices in addition to Mayor and Council include Deputy Clerk, City Administrator, Public Works, water superintendent, and Chamber of Commerce. The Holstein Fire and Ambulance departments are combined. Two positions lead the Ambulance and Fire Department including the Fire Chief and Ambulance Coordinator. The Department is currently made up of 27 volunteer firefighters, two (2) juniors, and one (1) cadet. Volunteers include Emergency Medical Technicians (EMT), Emergency Medical Technicians Advanced (EMTA), and Paramedics.

The city is covered by plans from the county such as Local/County Emergency Plan and County Recovery Plan. Along with others which are further discussed in the discussion of Community Capabilities. A Comprehensive Plan was adopted October 2, 2017.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Holstein is 1,396. Housing available in 2010 was 674, with 616 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 1,364, slightly lower than the 2017 estimate of 1,381. The 2013-2017 ACS 5-year estimates indicate median household income to be \$53,750 with 7.4% of the population falling below poverty level.

With new construction, about 71.8% of Holstein's housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 763 units with 138 vacant and 74 new construction homes built since 2000. According to 2010 census data, 7.7% of total population is under the age of five (5). About 23.8% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, an estimated valuation of the City’s assets was compiled based on the amount covered for its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determination. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Estimation of Total Assets    \$ **5,145,924**

*Leading Employers*

The following businesses, in addition to those as included in Community Supports listing, operate and/or have established a necessary presence in Holstein.

- V.T. Industries
- First Cooperative
- Galva Holstein Community School
- Good Samaritan Center

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall; Warning Siren	119 S Main St
Lohff-Schumann Memorial Community Center	301 Lohff-Schumann Dr
Maintenance Office	420 N Main St
Stubbs Memorial Library	207 E 2nd St,
Sports Complex & Related	
City Park	
Park/Bathhouse & Related	621 S Kiel St
Water Treatment; Wells and Related; Sand & Equip Storage	109 S Kiel St
Wells; Control Bldgs	Hwy 20
Water Tower	E Railroad St
Lift Station	302 N Main St
Sewage Lift Station	E 2nd St
Lagoon Lift & Related monitoring equip	German Ave
East Lift Station	11 N Lubeck

Community Supports, Vulnerable Populations, &/or Gathering Locations

US Post Office	121 E 2nd St
Ida County Economic Development	101 N Main St
Ridge View High School	519 East Maple St
Galva – Holstein Elementary School	
Little Raptors Daycare and School	
Good Samaritan Society	505 W. 2nd St
Holstein Senior Living (Assisted & Independent)	1500 S Kiel St
AmVets Legion Hall	
Masonic Hall	118 N Main St
Veterans Memorial Hall	121 N Main St
Douglas School @ Douglas County School Grounds	135 Union Ave (north & west outside city limits)
Holstein Golf Course	400 Kofmehl Dr
Holstein Country Club	
Holstein Supermarket	109 E 1st St
United Bank of Iowa	116 N Kiel St
St. Paul Lutheran Church	310 E Second St
CrossRidge Evangelical Free Church	Lohff-Schumann Dr
United Methodist Church	208 S Kiel St

*b. Participation*

A planning meeting was held on site at Holstein City Hall on July 24, 2019. In attendance were City Administrator Teresa Pudena, Public Works Director Scott Niemeier, and Denny Albers, also with Public Works. A planning packet was provided prior to the meeting. Communication was maintained throughout the development of this plan.

*c. Community Capabilities*

<b><i>Plans/Guidance Documents</i></b>	
<ul style="list-style-type: none"> <li>• Comprehensive Plan</li> <li>• Capital Improvement Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Land Use Plan</li> </ul>
<b><i>Policies/Ordinance - recodification in progress (@ time of planning meeting)</i></b>	
<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Tree Trimming Ordinance</li> </ul>



• Subdivision Ordinance		• Zoning Ordinance	
<b>Programs</b>			
Zoning/Land Use Restrictions			
ISO Fire Rating	Class 6		
Planning/Zoning Boards			
Tree Trimming Program			
Mutual Aid Agreements	IMAC (in addition to County-wide & Regional agreements)		
<b>Staff/Department</b>			
Engineer			
Public Works Official			
Emergency Response Team	Fire and Ambulance Department		
<b>Non-Governmental Organizations</b>			
• American Legion/AmVets		• Holstein Chamber of Commerce	
• Community Organizations			
<b>Local Funding Availability</b>			
Ability to apply for Community Development Block Grants			
Authority to levy taxes for a specific purpose			
Fees for water, sewer, gas, or electric services			
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>		

*Review of Actions Taken*

Following is a status update for actions and strategies as included in the 2014 county multi-jurisdictional hazardous mitigation plan. All actions are closed upon approval of this plan unless specifically noted here and/or added to the list of region projects.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A formal list is not maintained, however the Fire Station and Lohff-Schumann Rec Center (L-S) may be used as refuge from extreme heat. Restrooms at parks are open seasonally and may serve as cooling shelters.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* The City does not have a smoke detector program but one may be possible through the fire department.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* An assessment of security procedures and equipment has been conducted. Though cameras and door/entry controls are under discussion, it is classified as a low priority consideration. Handheld radios are in place at the Fire Department. A City frequency is available to enable communications between City & FD. Training is readily available. Concerns are more an issue of time than of opportunity. Volunteers go through a pre-screen process. Interest in hosting EMT and other advanced trainings in Holstein enabling more participation.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The City owns flood prone areas so an acquisition program is not needed. Some drainage repairs and redirection projects have been completed. Holstein has several areas designated to preserve natural open space including parks, a wetlands area, and restricted development near the golf course.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* Holstein does have an active Capital Improvement Plan to guide major project investments.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* No roadway access or elevation projects have been identified.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Holstein is not a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* No formal Tree Planting Plan is in Place. An ISU inventory on public property was completed but action has not been planned. Maintenance is not scheduled. Trees are removed or added periodically. Routine upkeep and responsibility for trees affecting the public right-of-way are designated within the City Code. Tree types for new plantings are restricted and a permit is required for variance. No Tree Board is in place; the Council acts on tree-related issues. No formal education programs are available.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard Subdivision Regulations are in place in the city code and a set of Building Standards are referenced. Floodplain regulations are not necessary.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open burn restrictions are in place, allowing burning of one week in fall, one in spring/early summer. Contents allowable are also restricted.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* To increase awareness of vulnerability to hazards, some reminders are posted.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* An informal snow removal and roadway maintenance plan is in place

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Schools have designated tornado refuge locations within all buildings. Shelter from moderate weather is available in restrooms in the parks, and the concession stand. Potential for add-in for new projects is an on-going consideration.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Specific communication improvements have not been implemented. However, City website and Facebook page are active and are frequently used to communicate necessary information to residents. Weather radios may be in place at the nursing home and schools. The City uses 2-way radios for internal use, and text alerts for weather specific information. A warning siren is in place.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Holstein's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Holstein sits entirely outside floodplain. NOAA Storm Event Database show record of twenty (20) reported events on ten (10) dates since July1, 2014 specifically in Holstein and 53 that affected the county as a whole. Concerns are drawn from historical record of occurrence and likely higher frequency of occurrence due to geographic location. Flash flooding is an issue at times but not an overriding concern. Extreme cold temperatures have escalated water main breaks. With two highways along and through town, transportation incidents are a significant concern as well.

*Priority Hazards*

- Tornado/Windstorm
- Severe Winter Storm
- Thunderstorm w/Hail & Lightning

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 5. Ida Grove

### a. Profile

The City of Ida Grove is situated slightly south and center of Ida County, and occupies 2.11 square miles. Highway 175 and Highway 59 travel east and west through the northern part of Ida Grove. Maple River runs through the east and north borders of the Ida Grove. Currently the Chicago and Northwestern Railroad travels through the center of the city used for shipping products.

#### *City Governance & Community Supports*

Ida Grove is governed by a six-person elected council and the Mayor. Offices in addition to Mayor and Council include City Clerk, Project Management Clerk, and Public Works. Ida Grove also has a Planning and Zoning Commission and Board of Adjustment. The Ida Grove Volunteer Fire Department is made up of about 25 firefighters. Ida Grove Fire Department is funded by a combination of township fire fees, city funding, and donations. The city takes part in the enhanced 911 system through the Ida County Communications Center.

The Ida Grove Ambulance service is a volunteer service with 19 crewmembers. The facility is staffed 24 hours a day, seven days a week. Ida Grove Ambulance Service response to emergencies in Ida Grove and surrounding areas. The department also provides emergent transfers from the local hospital to higher levels of care. The City of Ida Grove is a member of the NFIP program, though residents are known to be inactive under flood insurance. A Comprehensive Plan was adopted May 7, 2018.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Ida Grove is 2,142. Housing available in 2010 was 1,080, with 966 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 2,049, slightly lower than the 2017 estimate of 2,160. The 2013-2017 ACS ([https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml)) 5-year estimates indicate median household income to be \$43,451 with 13.5% of the population falling below poverty level.

With new construction, about 53.4% of Ida Grove's housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 1,104 units with 91 vacant and

53 new construction homes built since 2000. Estimates show a total of 33 mobile homes, 3.0% of the total housing units available. According to 2010 census data, 6.2% of total population is under the age of five (5). About 23.6% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	16,510,286
Personal Property	\$	949,379
Misc Property	\$	545,151
<b>Total</b>	<b>\$</b>	<b><u>18,004,816</u></b>

Leading Employers

The following businesses operate and have established a necessary presence in Ida Grove.

- Gomaco
- Midwest Industries
- Horn Memorial Hospital
- Odebolt Arthur-Battle Creek Ida Grove Community School District

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

City Hall	403 Main St
Fire Station	409 1 <sup>st</sup> St
Library & Related, etc.	103 E 2 <sup>nd</sup> St
Water Tower; Water Dept Related	100½ 7th St
Lift Station	88½ E Hwy 175
Lift Station	E Hwy 175
Lift Station	800 Walnut St
Maintenance Bldg (Streets)	1200 1 <sup>st</sup> St

Wastewater Treatment Plant & Related Sewer Works	
Treatment Plant & Related; Wells	2375 Keystone Ave
Badger Creek Lift Station	206 Rohwer St
Zobels Lift Station	811 S Main
Moorehead Lift Station	100 Moorehead Ave
Hilcrest Lift Station	465½ Pin Oak
Oak Grove Lift Station	200½ Susan Lawrence
Pump House	403 Iowa St
Various Parks, Walking Trail & Related	
Baseball Facility & Related	901 John Montgomery Drive
City Park & Related	207 Washington St
Parks Dept, Misc	10 Washington St
Swimming Pool & Related Bldgs/Equip	101 E 2 <sup>nd</sup> St
Pool & Related Bldgs, Equip	101 Barnes St
Municipal Airport	Office & related Bldgs
Rec Center/Indoor Pool	311 Barnes St
Castle Battlement	US 59 & Harold Godberson Dr
Zobels Park	Main St & Badger Creek Dr

Community Supports, Vulnerable Populations, &/or Gathering Locations

OABCIG Elementary School	Ida Grove Golf and Country Club
OABCIG High School	Ida Grove Skate Palace
Cobb Memorial Park	King Theatre
Food Pride	Moorehead House Museum
Golden Horizons	Moorehead Park
Horn Memorial Hospital	Morningside Healthcare Community
Ida Bowl	Zimmy's Bar & Grill

b. *Participation*

Two on-site planning meetings were conducted with the City of Ida Grove, the second included representatives from the County. The first meeting was held on July 12, 2019 with City Clerk Heather Sweeden and Project Management Clerk Kelly Young in attendance. The second meeting was held on July 24 with the following in attendance.



City	Bob Lorenzen, Parks Superintendent	County	Rhett Leonard, County Supervisor
	Gerrod Sholty, Crew Foreman		Ed Sohm, County EM Coordinator
County	Joe Cronin, County Assessor		Jeff Williams, County Engineer

c. *Community Capabilities*

In addition to County, Region, and State supports, the city has the following resources in place.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
Capital Improvement Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Ditch Maintenance (including restrictions)</li> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
National Flood Insurance Program (NFIP) Participant	CID #190156
ISO Fire Rating	Ida Grove FD – Class 5/5Y
Planning/Zoning Boards	
Tree Trimming Program	
Mutual Aid Agreements	Fire; IMAC (in addition to County and Region agreements)
<b>Staff/Department</b>	
Emergency Response Team	Fire and Ambulance Department
<b>Non-Governmental Organizations</b>	
Veterans Groups	
Chamber of Commerce	
Community Organizations	Kiwanis
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water & sewer services	

*Review of Actions Taken*

Following is a status update for actions and strategies as included in the 2014 county multi-jurisdictional hazardous mitigation plan. All actions are closed upon approval of this plan unless specifically noted here and/or added to the list of region projects.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is maintained but several public facilities are open and may serve as cooling shelters.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program is not in place through the city.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security measures have been added to the library and swimming pool. ATV plow is a relatively new addition. Training is readily available through local, county, region, and state programs. Air Pacs for the firefighters have been upgraded. Equipment replacement is conducted on an on-going basis with the majority of funding received through grants. There is interest in storm spotter training being available locally.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No program is in the works for property acquisition. Drainage work was completed in Ida Grove between the high school and Badger Creek.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* Projects as implemented are guided by a Capital Improvement Plan.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Roadway Elevation and Access projects have not been implemented nor have any been identified for consideration.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Capital Improvement Program was implemented in 2017.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Ida Grove is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A Tree Planting plan has not been implemented. Maintenance responsibilities, especially as they pertain to trees in the public right-of-way, are included in the City Code of Ordinances. As previous designees of Tree City USA, a Tree Board has been formed, but is currently inactive. Most recent plantings have been along the City's trail system. The city had

a Tree Board in place at one time, but it is no longer in place. An ordinance is in place addressing some tree maintenance issues, with additional restrictions under nuisances. A local education program is not in place under city operations regarding tree types and plantings.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Basic subdivision standards are included in the City Code. Recent addition of deferment to DNR approved permits for floodplain development is the only building standard reference in place. Modifications were still pending at the time of this planning meeting.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open burning is prohibited by ordinance in Ida Grove city limits.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* No action has been taken on this item.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A designated maintenance route is in place. A parking ban is in effect during winter months.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The Community Hall serves as refuge shelter and command center as needed.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The City does use PSAs to communicate important information to residents. Weather radio placement has not been implemented. Schools are connected with emergency response through two-way radios. Two-way radio communication is the primary communication network for the city and its response teams. Info is received by text/subscription-based alerts and communicated through the radio system. Tornado warning sirens are in place. They are sounded through the County Communications Center and soundings can be initiated at the City level.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Ida Grove's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Ida Grove has a significant portion of area designated as floodplain. Impacted by Maple River, Odebolt Creek, and Badger Creek, river flood is an obvious concern but flash flood related issues are more pressing. There are dam and levee concerns, further complicated by the recurring wet seasons on recent years accelerating deterioration and hindering access for necessary repairs/reinforcements. There are six (6) levees accounting for just under two (2) miles in Ida Grove. Of those with documented ratings, two (2) are rated as minimally

acceptable and two are unacceptable. The City has committed to maintaining those most at risk but actions are limited.

*Priority Hazards*

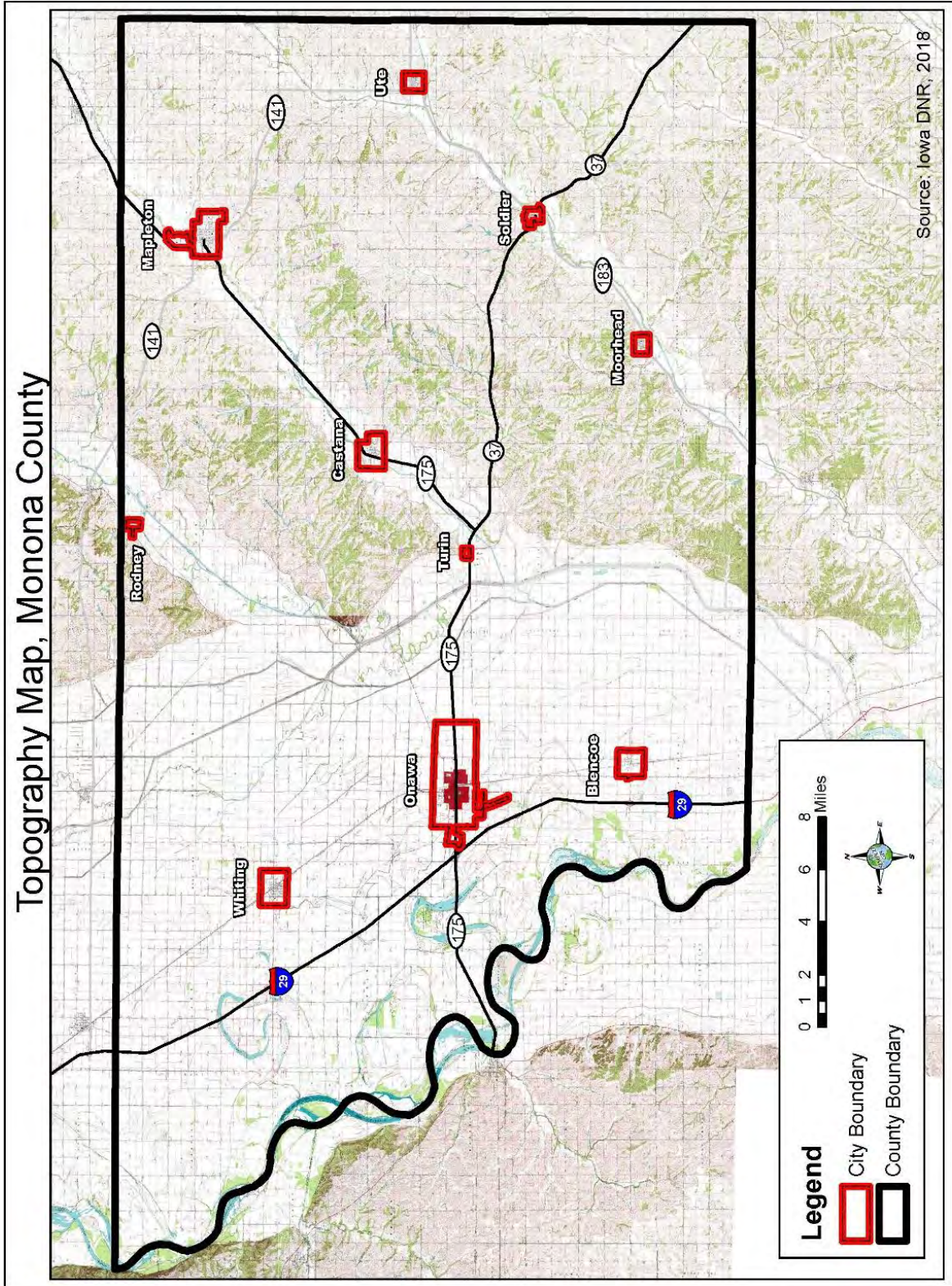
- Thunderstorm w/ Hail & Lightning
- Severe Winter Storm
- Tornado/Windstorm

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.



C. Monona



### Profile for County & Unincorporated Areas

Monona County is located near the center of Iowa's western boundary. The County is bordered by Woodbury County to the north, Crawford County to the east, Harrison County to the south, and the state of Nebraska across the Missouri River, to the west. Monona is approximately 699 square miles in size.

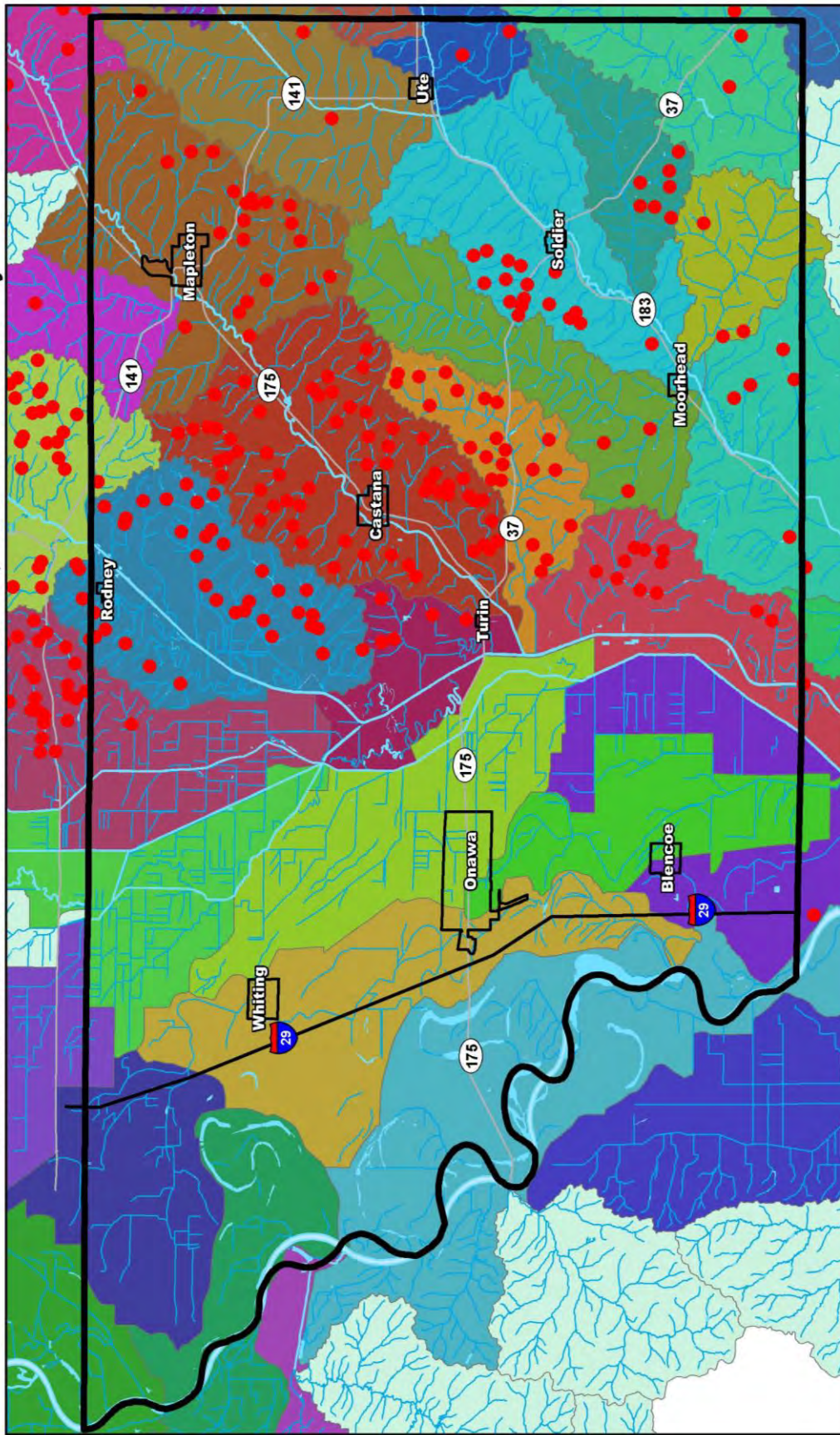
### *Rivers & Watersheds*

The western border of Monona County is the Missouri River. Other significant rivers in the County include the Maple River, Soldier River, and the West Fork of the Little Sioux River.

There are five (5) watersheds within the County that drain storm water and snow melt into streams and lakes, wetland areas, or into groundwater reserves. These watersheds are Blackbird-Soldier Watershed, Little Sioux Watershed, Monona-Harrison Ditch Watershed, Maple Watershed, and Boyer Watershed. Regional breakdown for watersheds is provided within *Region Planning Area* information. The following map depicts the sub-watersheds within those as listed above. Subwatersheds are determined based on hydrologic unit code (HUC) level 12, which includes more detail including tributary data.



# Watershed and Water Resource, Monona County



**Legend**

Arcola Creek-Little Sioux River	Dutch Hollow-Maple River	Lake Quinnebaugh-Missouri River	Upper Willow Creek
Bacon Creek-Missouri River	East Soldier River	Little Sioux River	Village of Soldier-Soldier River
Barber Creek-Little Sioux River	Elk Creek	McCandless Cleghorn Ditch	West Fork Ditch-West Fork Little Sioux River
Beaver Creek	Farmers Ditch	McNeil Ditch	Wolf Creek-Hatz Ditch
Buss Creek-Boyer River	Heister Creek-Maple River	Middle Soldier River	Lakes
Cobb Creek-Soldier River	Horsehead Creek-Missouri River	Monona Harrison Ditch	Major River
Dutch Creek-Simmons Creek	Jordan Creek	Mud Creek-Boyer River	Streams and Creeks
	Koler Creek-Maple River	North Blackbird Creek	Other Principle Arterial
		Norway Creek	Minor Arterial
		Oliver Lake Ditch-Monona Harrison Ditch	Dam
		Parnell Creek-Little Sioux River	
		Riverside Ditch	
		Rush Creek-Soldier River	
		Soldier River	
		Swanson Ditch-McCandless Cleghorn Ditch	
		Town of Adrian-Soldier River	

0.0 0.75 1.5 3 4.5 6 Miles

In addition to the dams as provided in title II *Hazards*, part B. *Definitions* listing, the following table shows all low hazard classification dams as on record for Monona County. All have a condition assessment of “Not Rated” and an EAP of “NR”.

<b>Dam Name</b>	<b>NIDID</b>	<b>Dam Name</b>	<b>NIDID</b>
ANDRESEN/COBERLY DAM	IA01885	MC CALL SUBWATERSHED 1-2182	IA02763
ARCOLA SUBWATERSHED SITE 1-5084	IA02725	MC CALL SUBWATERSHED M-17070	IA02764
ARCOLA SUBWATERSHED SITE 2-3090	IA02724	MC CALL SUBWATERSHED SITE 10-2	IA00765
ARCOLA SUBWATERSHED SITE B-3000	IA02726	MC CALL SUBWATERSHED SITE 10-3	IA00764
ARCOLA SUBWATERSHED SITE B-5350	IA02727	MC CALL SUBWATERSHED SITE 30-1	IA00773
ARCOLA SUBWATERSHED STA 44+80	IA00755	MC CALL SUBWATERSHED SITE 32-1	IA00774
ARNOLD-ARMSTRONG SUBWTRSHD 64+00 #25	IA00789	MC CALL SUBWATERSHED SITE 8-1	IA00762
ARNOLD-ARMSTRONG SUBWTRSHD SITE 3A-3050	IA02728	MC CALL SUBWATERSHED SITE M-1	IA00768
ARNOLD-ARMSTRONG SUBWTRSHD SITE M-14195	IA02729	MC CALL SUBWATERSHED SITE M-2	IA00767
ARNOLD-ARMSTRONG SUBWTRSHD STA 127+05	IA00785	MC CALL SUBWATERSHED SITE M-3	IA00766
ARNOLD-ARMSTRONG SUBWTRSHD STA 171+55	IA00784	MC CALL SUBWATERSHED SITE M-5	IA00761
ARNOLD-ARMSTRONG SUBWTRSHD STA 190+78	IA00783	MC MASTERS SUBWATERSHED 2703	IA02765
ARNOLD-ARMSTRONG SUBWTRSHD STA 2+05 #3	IA00779	MC MASTERS SUBWATERSHED 3075	IA02768
ARNOLD-ARMSTRONG SUBWTRSHD STA 23+00	IA00781	MC MASTERS SUBWATERSHED 3907	IA02766
ARNOLD-ARMSTRONG SUBWTRSHD STA 243+48	IA00782	MC MASTERS SUBWATERSHED 4592	IA02767
ARNOLD-ARMSTRONG SUBWTRSHD STA 62+89 #1	IA00780	McHugh Dam	IA04180
ARNOLD-ARMSTRONG SUBWTRSHD STA 69+48	IA00787	MIKE MIKKELSON SUBWATERSHED 11-3227	IA02776
ARNOLD-ARMSTRONG SUBWTRSHD STA 76+60 #3	IA00778	MIKE MIKKELSON SUBWATERSHED 3-1630	IA02769
ARNOLD-ARMSTRONG SUBWTRSHD STA 99+95	IA00786	MIKE MIKKELSON SUBWATERSHED 5-10316	IA02770
ARNOLD-ARMSTRONG SUBWTRSHD STA27+80 #26	IA00790	MIKE MIKKELSON SUBWATERSHED 5-13484	IA02771
BAKER SUBWATERSHED SITE 1-3	IA00801	MIKE MIKKELSON SUBWATERSHED 5-18280	IA02772
BAKER SUBWATERSHED SITE 2-4	IA00799	MIKE MIKKELSON SUBWATERSHED 5-5020	IA00700
BAKER SUBWATERSHED SITE 5-3	IA00800	MIKE MIKKELSON SUBWATERSHED 9-2555	IA02773
BARBER HOLLOW SUBWATERSHED SITE 5-1	IA00727	MIKE MIKKELSON SUBWATERSHED M-10210	IA02774
BARBER HOLLOW SUBWTRSHED SITE 5-H-3865	IA02730	MIKE MIKKELSON SUBWATERSHED M-2395	IA02775
Behrendt Dam	IA04210	MIKE MIKKELSON SUBWATERSHED M-5905	IA02777
CARLSON DAM	IA00698	MONONA COUNTY ROADGRADE DAM 13-83-43	IA00763
CHARLES WOODS LAKE DAM	IA01656	MONONA COUNTY ROADGRADE DAM 23-82-43	IA02444
CLOUD DAM	IA02934	MONONA COUNTY ROADGRADE DAM 5-82-42	IA00712



CLUBINE DAM	IA03737	MOORE SUBWATERSHED SITE M-10130	IA02788
COBERLY DAM	IA00699	MOORE SUBWATERSHED SITE M-10180	IA02787
COBERLY/BUTLER DAM	IA00705	MOORHEAD DAM	IA00742
COBERLY/SWENSON DAM	IA00754	MUCKY CREEK SUBWATERSHED SITE 5-4185	IA02789
COTTONWOOD-GREEN VALLEY SUBWS 50+40 #2	IA00745	MUCKY CREEK SUBWATERSHED SITE 6-1	IA00726
COTTONWOOD-GREEN VALLEY SUBWS 75+70 #2	IA00744	MUCKY CREEK SUBWATERSHED STA 19+20	IA00753
COTTONWOOD-GREEN VALLEY SUBWS 99+50 #2	IA00743	MUCKY CREEK SUBWATERSHED STA 26+20 #3	IA00749
COTTONWOOD-GREEN VALLEY SUBWS STA 14+10	IA00746	MUCKY CREEK SUBWATERSHED STA 28+50 #2	IA00748
CROY SUBWATERSHED SITE 1-1292	IA02731	MUCKY CREEK SUBWATERSHED STA 37+80 #8	IA00750
CROY SUBWATERSHED SITE 2200	IA02732	MUCKY CREEK SUBWATERSHED STA 41+70	IA00752
CROY SUBWATERSHED SITE 22200	IA02733	MUCKY CREEK SUBWATERSHED STA 57+00	IA00751
CROY SUBWATERSHED SITE 23700	IA02734	NASS DAM	IA03222
CROY SUBWATERSHED SITE 2530	IA02735	NAURUDE DAM	IA00713
CROY SUBWATERSHED SITE A3-1050	IA02736	NEPPER SUBWATERSHED SITE 3348	IA02791
CROY SUBWATERSHED SITE A3-4908	IA02737	NEPPER SUBWATERSHED SITE M-5700	IA02790
CROY SUBWATERSHED SITE A4-2458	IA02738	NUTT HOLLOW SUBWATERSHED SITE 2-3176	IA02868
CROY SUBWATERSHED SITE A4-4572	IA02739	NUTT HOLLOW SUBWATERSHED SITE 2-6161	IA02792
CROY SUBWATERSHED SITE G3-2730	IA02740	NUTT HOLLOW SUBWATERSHED SITE 3-3075	IA01414
CROY SUBWATERSHED SITE G3-4083	IA02741	NUTT HOLLOW SUBWATERSHED SITE M-12855	IA02793
CROY SUBWATERSHED SITE G5-1890	IA02742	NUTT HOLLOW SUBWATERSHED SITE M-3650	IA01415
CROY SUBWATERSHED SITE M-10500	IA02743	NUTT HOLLOW SUBWATERSHED SITE M-6842	IA01413
CROY SUBWATERSHED SITE M-6159	IA02744	OLSON/MANN DAM	IA00798
CROY SUBWATERSHED SITE M-7500	IA02745	PHILLIPS SUBWATERSHED SITE 131	IA02799
DALY DAM	IA02321	PHILLIPS SUBWATERSHED SITE 3250	IA02803
DAVIS-BATTLE CR. WATERSHED SITE C-12-1	IA00760	PHILLIPS SUBWATERSHED SITE 5740	IA02804
DAVIS-BATTLE CR. WATERSHED SITE C-12-2	IA00759	PHILLIPS SUBWATERSHED SITE M-11985	IA02801
DAVIS-BATTLE CR. WATERSHED SITE D-1	IA00770	PHILLIPS SUBWATERSHED SITE M-17312	IA02802
DAVIS-BATTLE CR. WATERSHED SITE D-3	IA00771	PHILLIPS SUBWATERSHED SITE M-6600	IA02800
DAVIS-BATTLE CR. WATERSHED SITE D-7	IA00769	PLAGGE DAM	IA03733
DAVIS-BATTLE CR. WATERSHED SITE E-1	IA00710	REED SUBWATERSHED SITE 1-1	IA02657
DAVIS-BATTLE CR. WATERSHED SITE F-1	IA00711	REED SUBWATERSHED SITE 13C-2232	IA02808
DAVIS-BATTLE CR. WATERSHED SITE G-1	IA00729	REED SUBWATERSHED STA 37+70 #2	IA00735
DAVIS-BATTLE CR. WATERSHED SITE G-2	IA00728	REED SUBWATERSHED STA 41+45 #8	IA00736
DAVIS-BATTLE CR. WATERSHED SITE H-1	IA00731	REED SUBWATERSHED STA 45+25 #4	IA00738
DAVIS-BATTLE CR. WATERSHED SITE H-3	IA00730	REED SUBWATERSHED STA 46+55 #11	IA00737

DAVIS-BATTLE CR. WATERSHED SITE H-4-1	IA00772	REED SUBWATERSHED STA 46+80 #3	IA00740
DAVIS-BATTLE CR. WATERSHED SITE H-4-2	IA00732	REED SUBWATERSHED STA 71+10	IA00741
DAVIS-BATTLE CR. WATERSHED SITE H-4-4	IA00733	REED SUBWATERSHED STA 88+35 #2	IA00734
GALLUP SUBWATERSHED 1-1200	IA02760	REED SUBWATERSHED STA 97+82	IA00739
GALLUP SUBWATERSHED 4-3538	IA02761	REINIG DAM	IA00797
Gochenour Dam	IA04178	RODNEY SUBWATERSHED SITE 12-2	IA00701
GOSCH DAM	IA00758	RODNEY SUBWATERSHED SITE 2-1	IA02811
HABINCK SUBWATERSHED STA 93+30	IA03087	RODNEY SUBWATERSHED SITE 5-1	IA00704
HANIGAN DAM	IA03734	RODNEY SUBWATERSHED SITE 8-1	IA00703
HIEBER DAM	IA03735	RODNEY SUBWATERSHED SITE 8-2	IA00702
HUFF SUBWATERSHED 3-6069	IA02762	SAVERY/WELLIVER DAM	IA00724
HUFF SUBWATERSHED STA 122+69 #1	IA00804	SCHLIES DAM	IA03267
HUFF SUBWATERSHED STA 42+70 #1	IA00802	SCNOENJAHN DAM	IA00775
HUFF SUBWATERSHED STA 77+72 #1	IA00803	SIEVERS DAM	IA00747
HUFF SUBWATERSHED STA 94+07 #3	IA00805	SPRING VALLEY PROJECT NO. 2	IA01648
HULL/COBERLY DAM	IA00715	TOM KING SUBWATERSHED SITE 6290	IA02813
HUNDAHL DAM	IA01883	U-B SUBWATERSHED SITE 2-2	IA00777
IOWA NONAME32	IA00714	U-B SUBWATERSHED SITE 2C-1	IA00776
IOWA NONAME33	IA00723	UPPER BEAVER SUBWATERSHED SITE 15-1	IA00718
IOWA NONAME76	IA01636	UPPER BEAVER SUBWATERSHED SITE 20-1	IA00716
JOHNSON DAM	IA03736	UPPER BEAVER SUBWATERSHED SITE 4-1	IA00722
KINDER/PATTERSON DAM	IA00725	UPPER BEAVER SUBWATERSHED SITE 50-1	IA00721
LAWSON SUBWATERSHED SITE 1-1	IA00706	UPPER BEAVER SUBWATERSHED SITE 51-1	IA02814
LAWSON SUBWATERSHED SITE 2-1	IA00707	UPPER BEAVER SUBWATERSHED SITE 6-1	IA00720
LAWSON SUBWATERSHED SITE 2-2	IA00708	UPPER BEAVER SUBWATERSHED SITE M-1	IA00717
LAWSON SUBWATERSHED SITE 3-1	IA00709	UPPER BEAVER SUBWATERSHED SITE M-2	IA00719
LEECH HOLLOW SUBWATERSHED SITE C-11	IA01888	WEST BEAVER SUBWATERSHED STA 23+45 #A	IA00792
LEECH HOLLOW SUBWATERSHED SITE C-12	IA01891	WEST BEAVER SUBWATERSHED STA 33+30	IA00795
LEECH HOLLOW SUBWATERSHED SITE C-14	IA03908	WEST BEAVER SUBWATERSHED STA 40+06 #A	IA00791
LEECH HOLLOW SUBWATERSHED SITE C-2	IA01890	WEST BEAVER SUBWATERSHED STA 51+80	IA00794
LEECH HOLLOW SUBWATERSHED SITE C-5	IA01889	WEST BEAVER SUBWATERSHED STA 97+07	IA00793
LEECH HOLLOW SUBWATERSHED SITE C-6	IA01887	WOODS HOLLOW SUBWATERSHED SITE 1-2875	IA02820
LEECH HOLLOW SUBWATERSHED SITE C-8	IA03002	WOODS HOLLOW SUBWATERSHED SITE M-10450	IA02819
LITTLE SIOUX SCOUT RANCH DAM	IA02723	WOODS HOLLOW SUBWATERSHED STA 40+42	IA00796
LOWER BEAVER SUBWTRSHD STA 21+00 #2	IA00757	WOODWARD GLEN SUBWATERSHED SITE 5800	IA02821

### *Landform Regions & Geology*

Monona County is composed of three (3) distinct landform regions that include Missouri Alluvial Plain, Loess Hills, and Southern Iowa Drift Plain.

The Missouri Alluvial Plain was formed by erosion and sediment deposits resulting from the Missouri River. This landform region is characterized by backwater sloughs and oxbow lakes. There is also greater potential for flooding within this region.

The Loess Hills and Southern Iowa Drift Plain both resulted from geological processes related to ancient glaciers. The Loess Hills are unique to the region. This landform was created from the accumulation of wind-blown silt. Today these steep hills rise up from the surrounding landscape. The Southern Iowa Drift Plains are marked by rolling hills which are the result of the manipulation of glacial sediment deposits by glacial melt and streams.

### *Transportation network*

On the western side of the County is Interstate 29, which generally runs north to south. State Highways 37, 141, 175, and 183 are included In the County's read network. There are no U.S. Highways.

The County's secondary road system is composed of 1,063.89 miles. Within this category, Farm-to-Market roads make up 353.94 miles, while Area Service roads account for 709.95 miles. Gravel or earth surface types account for 860.65 miles of the secondary road system. The remaining 195.54 miles are composed of bituminous, asphalt, or PCC surface types.

### *County Governance & Supports*

The county seat is located in Onawa, in the center of the western half of the County. Its jurisdiction covers all unincorporated portions within county boundaries. Monona County is governed by a three (3)-person Board of Supervisors. The Board has both legislative and administrative powers and is the policy-making body of Monona County government. Additional offices include the following departments:

- Auditor / Elections
- Assessor

- Attorney
- Clerk of Court
- Engineer / Roads
- Emergency Management
- Recorder
- Sheriff
- Community Services
- Early Childhood Iowa
- Treasurer / Auto / Driver's License
- Veterans Affairs
- Zoning & Environmental Health
- 911 Services

The Monona County's Emergency Management Agency is responsible for the coordination of the emergency response activities of various law enforcement and fire departments, the Hazardous Materials Response Team, local hospitals, medical and ambulance services, as well as Red Cross, Salvation Army, and Health & Human Services agencies. The Monona County Sheriff's Office provides law enforcement to the County, which includes jail, communications, patrol, and protection services. A sheriff and seven (7) deputies staff this office.

*County Facilities*

For purposes of recognizing County facilities as critical in terms of mitigation planning, the following are identified as such.

Equipment Garages	12008 Aspen Ave, Albaton 400 Oak, Blencoe
Park Restroom Bldg	29998 Filbert Ave, Blencoe
Shelter House & Related	Sec 7 Twp 82 Rge 45, Blencoe
Equipment Garage	318 Pine, Castana
Shelter/Restrooms & Related	Sec 5 Twp 84 Rge 43, Castana
Shelter/Restrooms & Related; Antenna Tower	Sec 23 Twp 84 Rge 44, Castana
Maintenance/Equip Storage & Related	140 Maple, Mapleton
Shelter/Restrooms & Related; Office & Mechanic Bldg; Storage Sheds	201 S Maple, Mapleton
Equipment Garage	40 S Muckey, Mapleton
Shelter House & Related	Sec 30 Twp 85 Rge 43, Mapleton
Equipment Garage	102 Railroad, Moorhead
Museum	29508 Oak Ave, Moorhead
Law Enforcement Ctr	909 7th St, Onawa
Multiple Storage, County Shop Sheds; Related Mntc	708 20th St, Onawa

Court House; Court House Annex; Garage	610 Iowa Ave, Onawa
Conservation Office/Shop Bldg; Storage Bldgs; Shelter	318 E Iowa Ave, Onawa
Pump Houses; Restroom	Sec 3 Twp 83 Rge 45, Onawa
Shelter/Restrooms & Related	Sec 3 Twp 83 Rge 44, Rodney
Shelter/Restrooms & Related; Antenna Tower	41425 280th St, Soldier
Equip Garage; Supply Storage & Maintenance-related Bldgs	110 IA-37, Soldier
Equipment Garage	115 Wolfe, Turin
Historic Dwellings; Barn & Related	22133 Larpenteur Memorial Rd, Turin
Equipment Garage	118 W Main, Ute
Equipment Garage	103 Wells, Whiting

### Education

Monona County is served by several school districts, with only three (3) housing facilities within county borders. A total of four (4) elementary schools and three (3) middle school/high schools represent the following districts:

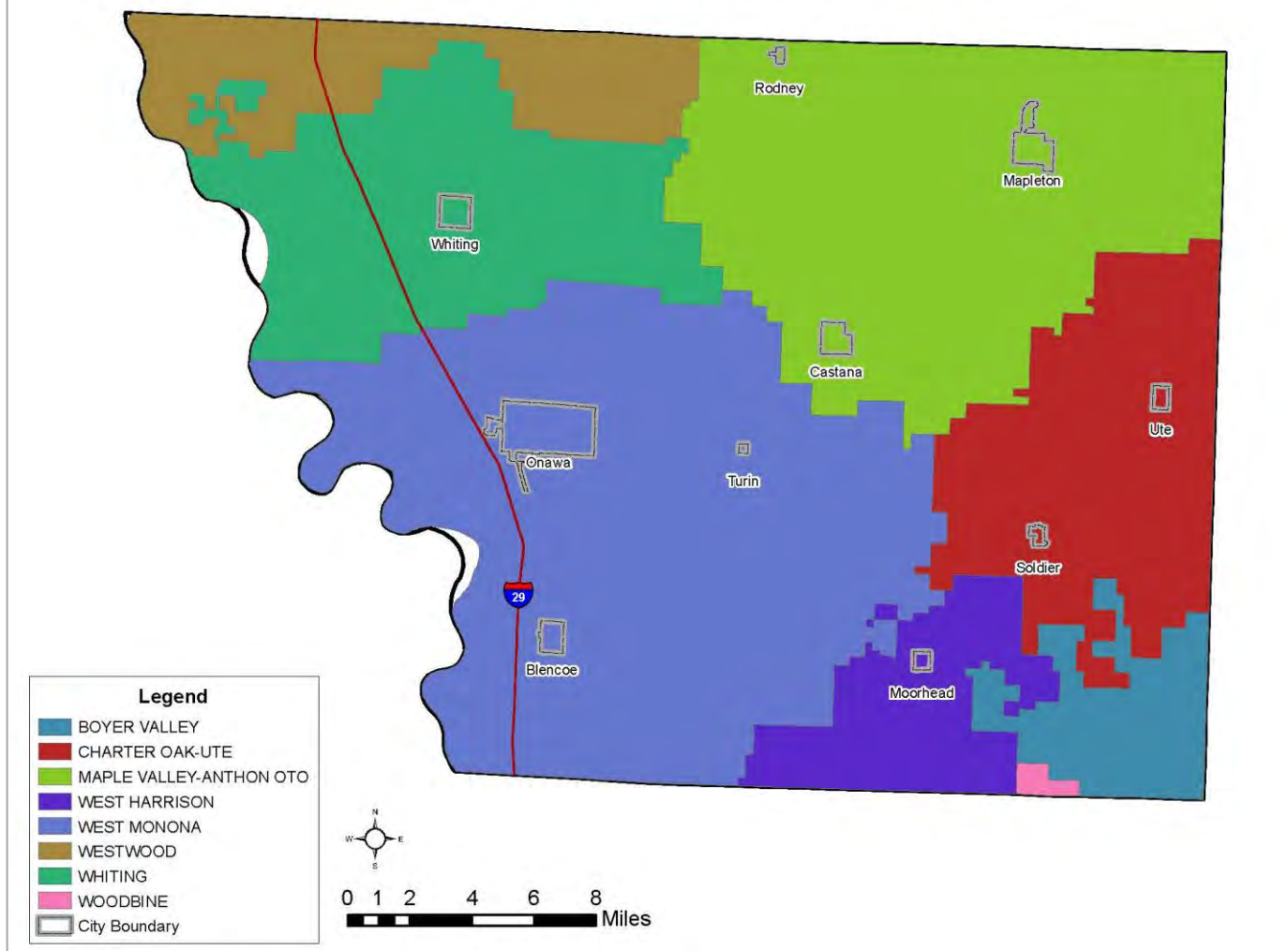
- Whiting Community Schools
- West Monona Community Schools
- Maple Valley-Anthon Oto Community Schools

Though there are no colleges or universities within Monona County, there is an ISU Extension site in Onawa.

Monona County has a higher percent of residents with a high school degree or equivalency, as well as residents with some college compared to the rest of the State. The County and State have similar rates of residents with an associate’s degree. However, the County falls behind within the categories of bachelor’s degree and graduate or professional degree.

<b>Level of Education</b>	<b>Monona</b>	<b>Iowa</b>
No high school diploma	8.89%	8.16%
High school degree (includes equivalency)	39.00%	31.52%
Some college, no degree	24.51%	21.31%
Associate’s degree	11.41%	11.34%
Bachelor’s degree	10.87%	18.71%
Graduate or professional degree	5.32%	8.97%

## School Districts, Monona County



### Population

Based on 2010 census data, the population of Monona County was 9,243. American Community Survey (ACS) data estimates show the 2017 population at 8,865, indicative of a slightly declining population. Focusing on the unincorporated areas of Monona County, the population in 2010 was 2,986, and 2017 population decline slightly to 2,577. Taken together, this reveals individuals could be moving out of unincorporated areas and into cities – a trend seen nationwide.

Looking to the future, population growth is unlikely. The maximum growth rate is estimated to be -0.1%, which results in a 2040 population of 9,204 – 39 fewer residents compared to 2010.



Both the minimum and mean growth rate estimates show population decline by thousands of residents in the same time period.

According to 2013-2017 ACS 5-year estimates, the median household income is \$41,598, which is significantly lower than the median household income for the state of Iowa at \$56,570. Monona County does have a slightly higher percent of its population living below the poverty level compared to Iowa, at 14.9% and 12% respectively.

The County's proportion of residents that are age 65 or older is also high compared to the State, at 24.2%. FEMA identifies this group as a vulnerable population.

<b>Community Characteristics</b>	
Population (2010)	9,243
Unincorporated Population (2010)	2,986
Population (2017)	8,865
Unincorporated Population (2017)	2,577
Total Households	4,047
Median Household Income	\$41,598
Median Household Income – Iowa	\$56,570

<b>Population Projections</b>			
	MIN (Growth Rate = -2.32%)	MEAN (Growth Rate = -1.08%)	MAX (Growth Rate = -0.1%)
2010	9,243	9,243	9,243
2020	7,890	8,388	9,230
2030	6,735	7,612	9,217
2040	5,748	6,735	9,204

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Region</b>
5 years and younger	430	4.9%	6.78%
65 years and older	2,143	24.2%	16.01%
Below the poverty level	1,321	14.9%	12.88%
Living with a disability	1,197	13.9%	12.41%

### Housing

Total housing units in Monona County is 4,742. Of those, 4,047 are occupied resulting in a 14.7% vacancy rate. This is high compared to other counties in the region. Within the category of occupied housing units, 2,833 are owner-occupied, while 1,214 are renter-occupied. Median home value is \$84,300, which is over \$50,000 less than the state median home value. Median rent is also less than Iowa at \$572. This is \$168 less than the State.

<b>Values</b>	<b>Monona</b>	<b>Iowa</b>
Median Home Value	\$84,300	\$137,200
Median Rent	\$572	\$740
<b>Units</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	4,742	-
Occupied	4,047	85.3%
Owner-occupied	2,833	70.0%
Renter-occupied	1,214	30.0%
Vacant	695	14.7%

### Income & Economics

The table below communicates the quantity and proportion of employed individuals within each industry. The total employed population of Monona County is 4,307. The three leading industries are:

1. Education services and health care and social assistance
2. Retail trade
3. Arts, entertainment, and recreation, and accommodation and food services.

Construction and Agriculture were also significant categories.

Employers within the first industry include the various school districts as provided as well as healthcare professionals as employed by Burgess Memorial Hospital, a leading employer in Monona County. The second and third leading industry, include a combined 1,005 employees. Leading employers in addition to Burgess Memorial Hospital and the MVAO CSD are Monona County Iron, County of Monona County, and Westendorf Manufacturing Company.

<b>Industry for the Civilian Employed Population 16 and over</b>		
Civilian employed population (16 and older)	4,307	-
Agriculture, forestry, fishing and hunting, and mining	380	8.8%
Construction	393	9.1%
Manufacturing	334	7.8%
Wholesale trade	105	2.4%
Retail trade	559	13.0%
Transportation and warehousing, and utilities	257	6.0%
Information	72	1.7%
Finance and insurance, and real estate and rental and leasing	207	4.8%
Professional, scientific, and management, and administrative and waste management services	183	4.2%
Education services and health care and social assistance	1,094	25.4%
Arts, entertainment, and recreation, and accommodation and food services	446	10.4%
Other services except public administration	165	3.8%
Public administration	112	2.6%

Monona County holds the following valuation of assets based on the County's 2019 assignments as provided through its insurance policy. Such assessment shall be considered in calculation of planned and potential mitigation projects.

#### 2019 Valuation of County Assets

Building	\$	\$17,255,086
Personal Property	\$	\$2,046,847
EDP-Hardware	\$	\$928,280
EDP-Software	\$	\$64,917
Misc Property Sched	\$	\$7,112,116
Misc Prop Unsched	\$	<u>\$187,455</u>
<b>Total TIV</b>	<b>\$</b>	<b><u>\$27,594,701</u></b>

#### Participation

A planning meeting for Monona County and its unincorporated areas was held on July 9, 2019 at the County Law Enforcement Center. Following are the County staff in attendance.

Patrick Prorok	EMA Coordinator
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Peggy Rolph	Auditor
Jeff Pratt	Sheriff
Tim Peters	Assessor
Doug Kuhlmann	Conservation Director

### Capabilities

In addition to statewide and regional capabilities as included in respective summaries, the following is representative of resources supporting successful implementation of mitigation actions.

<b>Plans/Guidance</b>	
Capital Improvement Plan <i>via annual budget process</i>	
Comprehensive Land Use Plan	
Comprehensive Plan	
County Recovery Plan	
Critical Facilities Plan (Mitigation/Response/Recovery)	
Flood Mitigation Assistance (FMA) Plan	
Economic Development Plan	(County) Economic Development Partnership for Growth
County Emergency Plan	
<b>Policies/Ordinance</b> (complete list available @ <a href="https://www.mononacounty.org/Ordinances.html">https://www.mononacounty.org/Ordinances.html</a> )	
<ul style="list-style-type: none"> <li>• Zoning Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance (including <i>Debris Mgmt Plan</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Floodplain Management Ordinance</li> </ul>
<b>Programs/Commissions</b>	
Historic Preservation Commission	
Mutual Aid Agreements	County-wide; SCFR HazMat Response
National Flood Insurance Program (NFIP) Participant	CID #190893
Planning/Zoning Boards	Enterprise Zoning Commission (oversight of Property Acquisition Prog)
	Development Planner
	Includes oversight of Builder's Plan
	NFIP Floodplain Administrator
	Zoning/Land Use Restrictions
<b>Staff/Department</b>	

Emergency Management Coordinator	Hazard Awareness Program
Emergency Response Team	Includes oversight of Emergency Operations Center
Engineer	
Mapping Specialist (GIS)	Monona Co; SIMPCO
Secondary Roads Dept	Includes oversight of Tree Trimming Program & Compliance
<b>Non-Governmental Organizations</b>	
American Red Cross	
Veterans Groups	
<b>Local Funding Availability/Eligibility</b>	
Apply for Community Development Block Grants	
Capital Improvements funding	
Levy taxes for specified purpose	
Fees for water, sewer, gas, or electric services	
Impact fees for new development under the Economic Development Commission	
Ability to incur debt through: <ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>	

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* The County has not compiled a list of shelters. However, parks and recreation areas equipped with restrooms typically have covered gathering places as well. Residents and visitors may also seek refuge from tree cover or within nearby community facilities.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector distribution program is not in place through county departments, nor is it likely to be pursued.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A county-funded generator has been added to the community centers in Onawa and Mapleton. Both are designated refuge locations/command centers in the event of a disaster, therefore assigning them critical facility designation for the County. Also added to county resources are a rescue boat and a gator to improve access when roads are impassable.

There is an ongoing need for equipment repair and replacement at the county level. Projects and equipment are prioritized by department and subjected to annual budget discussions. In recent years, generators have been put into place at the Onawa and Mapleton Community Centers. Training needs for the County and the response teams that serve its jurisdictions are met annually through county, region, and state designated funding programs. The county participates in annual training exercises, table top and full-scale, as means of improving coordination during and after disaster events.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* There is not a recognized need for the county to acquire flood-prone properties. Some property improvements have occurred as an additional benefit to roadway improvements. No mitigation measures specific to improve flood resiliency have not been implemented. Some road projects have improved drainage patterns in and around the community. The County and the County Conservation Board ensure preservation of natural greenspace throughout the county. No new areas have been identified to increase such designations.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Many bridge and tube projects have been completed and many remain in queue as future projects.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Per the County CIP, bridge and tube projects have been completed and many remain in queue as future projects. Equipment purchases are also among mitigation-related actions completed since 2014.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Monona County is a participant in the National Flood Insurance Program.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Tree Planting and Maintenance Plans are largely at the discretion of the jurisdiction. The County Conservation Board does have tree-related education opportunities through their oversight of the Arboretum. The Conservation Board serves as the authority on county tree concerns. Every other year they distribute trees for planting throughout the county. The CCB is monitoring the county's relatively high percentage of Ash trees. A grinder is available to aid in clearing of storm debris and refuse, and will be an integral part of Ash tree removal as effects of the Emerald Ash Borer Beetle impact the county.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations and codified building standards are at the discretion of the jurisdiction. Zoning and planning guidance can be requested through the County P&Z

Commission. Floodplain regulation is in place for county operations. Further guidance can be found through the Iowa DNR.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Burn restriction are in place in terms of creating a nuisance and as regulated through Emergency Management on declared red flag warnings.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards/education.

*Status:* The County actively promotes awareness of vulnerability to hazards through quarter report-outs to mayors, the availability educational resources through the EMA office, and promotional info booths at the County Fair and other venues as applicable.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Prioritized routes are in place. Additional snow removal equipment would be beneficial. Secondary Roads department oversees the county snow plan, with assistance from county and local law enforcement as applicable.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The County has identified some locations that would benefit greatly from the addition of a tornado shelter. Design and development has not taken place, as funding is not available.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*



*Status:* Monona County is part of the Alert Iowa notification system that provides subscribers with info updates via their preferred means of communication -- text, email, or phone. The County Communication Center has developed a flood chain as means to improve coordination and collaboration between departments and jurisdictions in the event of a flood emergency. The county has promoted subscription to Alert Iowa notification system and will continue to do so.

The County has provided weather radios to jurisdictions for distribution in the past, though not in recent years. As technology becomes more available, there is little need to promote a large distribution of weather radios. Each jurisdiction is equipped with at least one warning siren. Siren-related projects have been identified by some communities and in rural areas by the County.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* While internal Communications Center operations are improved periodically, the County is not seeking to improve local weather radio service, as such action is not necessarily within control of the jurisdiction. The same is true for cable TV and telephone interrupt warning systems and reverse 911 programming. Fortunately, such services are routine provisions available through local franchise holder for cable and telephone services.

## Risk Assessment

### *Contributing Factors*

Geography and historical event data contribute significantly in determining county priorities. Some projects initiated by Region IV LEPC (LEPC Mapping Application and the 2018 Hazardous Materials Commodity Flow Study) provide data to support presence of concerns related to these contributing factors. As both projects include sensitive data, they are not available to the general public. Additional considerations include:

- Based on the interactive LEPC Haz Mat Response Map application, there are 70 Tier II facilities within Monona County alone. Combined with others within the region, and the transportation network carrying vast quantities of hazardous material commodities through the county, potential for hazardous materials incidents and transportation incidents hold a significant presence.
- The proximity of the Fort Calhoun Nuclear Power Plant in Blair, NE – at less than 50 miles from Blencoe. Should a disaster affect that plant, Monona County will likely be included in the fallout.

Fortunately, recordable tornado activity has not impacted Monona County in recent years. However, high winds, hail, and flooding complications have been notable in 2019 alone.

#### *Priority Hazards*

The County has designated the following as priority hazard concerns.

- Tornado/Windstorm
- Flooding
- Severe Winter Storm
- Thunderstorm w/ Hail & Lightning

This is supported by the record of recent storm events and results of public input as collected through the Monona County Fair. From discussion with County representatives and comments as provided by survey respondents, Extreme Heat, Hazardous Materials Incidents, Transportation Incidents, and active shooters (Terrorism) pose considerable concern as well. Earthquake, Landslide, Sinkhole, and Radiological Incident are least concerning to those participating in plan preparation.

#### *Record of Events*

Tornado will continue to be a significant concern for Monona County. Since 2001, ten (10) tornadoes have been recorded – two were categorized as EF-3 and resulted in four (4) deaths and 62 injuries combined.

Fresh in the minds of residents are the flood events of 2019. Related activity is not fully catalogued in Storm Event databases at the time of recording notable events. However,

Monona County was among Iowa Counties eligible for Public and Individual Assistance under the Presidential Disaster Declaration DR-4421 with events beginning March 13, 2019.

Records from NOAA show 34 reported weather incidents between July 1, 2014 and October 31, 2019. As shown below, nine (9) events were reported in the NOAA Storm Events database between 10/10/2018 and 10/31/2019, the most recent 12-month period available.

<b>Location</b>	<b>Date</b>	<b>Time</b>	<b>Type</b>	<b>Mag</b>	<b>PrD</b>
Monona (Zone)	1/1/2019	2:00	High Wind	59 kts. MG	0.00K
Monona (Zone)	1/29/2019	18:00	Cold/wind Chill		0.00K
Monona (Zone)	2/23/2019	12:00	Blizzard		0.00K
Ute	3/13/2019	11:49	Flood		0.00K
Mapleton Muni Airport	3/13/2019	23:00	Flood		4.200M
Turin	6/20/2019	18:45	Hail	1.00 in.	0.00K
Whiting	6/21/2019	2:30	Hail	1.00 in.	0.00K
Onawa	7/3/2019	8:31	Flash Flood		0.00K
Onawa	9/14/2019	8:09	Hail	0.88 in.	0.00K
<b>Total:</b>					4.200M

More events are included in the Region portion of this plan under section E. *Risk Assessment – Record of Events*. A full range of events occurring since the completion of the 2014 Plan, and events after 10/31/2019 as added can be found online through the NOAA search engine at <https://www.ncdc.noaa.gov/stormevents/>.

## Jurisdictions

### 1. Blencoe

#### a. Profile

The city of Blencoe is located near the southwest corner of Monona County. County Highways E60 and K45 intersect near the center of the western boundary. Blencoe is located just east of Interstate 29. Fletcher ditch runs southwest away from the city. A few miles west of Blencoe is the Missouri River and Huff-Warner Access Area.

*City Governance & Community Supports*

Blencoe is governed by a five (5) person elected City Council and a Mayor. In addition to Mayor and Council, City offices include City Clerk. Fire and rescue services for the City and surrounding area are provided by the Blencoe Volunteer Fire Department, which is partially funded by the City. Law enforcement services are contracted by the City.

The City of Blencoe is not a member of the NFIP program. The Municipal Code of Ordinances was last updated in 2018. A Comprehensive Plan was adopted in 2014.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Blencoe was 224. American Community Survey (ACS) data estimate show the 2017 population at 243, indicating slight population growth. According to the 2013-2017 ACS 5-year estimates, the median household income is \$42,500, which is just slightly more than Monona County, which is estimated to be \$41,598. Blencoe’s proportion of individuals living below the poverty level is in line with Monona County and the state of Iowa.

Blencoe has a larger percent of its population at 5 years of age and younger. FEMA considers this to be a vulnerable population. It is also indicative of possible population growth.

<b>Community Characteristics</b>	
Population (2010)	224
Population (2017)	243
Total Households	100
Median Household Income	\$42,500
Median Household Income – Monona County	\$41,598

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Monona</b>	<b>Iowa</b>
5 years and younger	30	12.3%	4.9%	6.3%
65 years and older	57	23.5%	24.2%	16.0%
Below the poverty level	34	14.0%	14.9%	12.0%
Living with a disability	23	9.5%	13.9%	11.6%

Total housing units in Blencoe is 109. Of those, 100 are occupied resulting in an 8.3% vacancy rate. Like many smaller communities in Iowa, the City’s housing stock is aging. Only three structures were built since 2000, one new home constructed since the 2014 Plan. About two thirds of the housing stock is 50 or more years old.

<i>Housing Characteristics</i>	<i>Count</i>	<i>Percent</i>
Total Housing Units	109	-
Occupied	100	91.7%
Vacant	9	8.3%
Mobile Homes	6	5.5%
<i>Age of Residential Structure</i>		
Built 2000 or later	3	2.8%
Built 1970 – 1999	32	29.4%
Build 1969 or earlier	74	67.9%

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	452,631
Personal Property	\$	122,315
Total Property in the Open	\$	<u>367,646</u>
<b>Total</b>	<b>\$</b>	<b><u>942,592</u></b>

*Leading Employers*

Most residents work outside of Blencoe, in surrounding communities such as Onawa to the north. It is important to note the New Cooperative, 300 Main St. Under new management, the Co-op hosts 100,000-gallon capacity propane storage.

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

In addition to valuation of privately owned properties, facilities, and personal property, each of Blencoe’s proposed Mitigation Actions and Strategies pursued for implementation in the next five (5) years will fully consider protections to those assets and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation those structures. Those entities include the following Community Support office(s) and/or Gathering Location(s).

<b>Critical/City Facilities</b>	
Community Bldg & Related	413 Main St
Fire Station; Warning System, & Related	510 Main St
City Park	515 Linn St
Richardson Park	502 N Manley St
Lift Stations & Sewer Lift Stations	197 Main St
	700 Main St
	502 N Manley St
2-Cell Lagoon	(East on) County Hwy 60
Shelter House; Water Tower & Related	Linn St & Main St
Water Treatment & Related	515 Linn St
Shop/Storage & Related	201 Front St
Campground	
City Maintenance Shed	201 Oak St
Go-Kart (private business on City Property)	700 Main
<b>Community Support Facilities</b>	
St Bernard Catholic Church	201 Main St

Private businesses and organizations play an essential role in the City’s recovery efforts and communication networks and may be categorized as essential or critical facilities. The list is not exhaustive. Additional community churches, organizations, and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis.

b. *Participation*

A planning meeting with City Clerk Becky Anderson and Public Works/Waterworks Supervisor Chip Collison was conducted via phone conference on May 5, 2019. A second meeting was conducted at City Hall as a special meeting of the Council on June 10, 2019 with Mayor Bart McDowell, and Councilmembers Janet Ryan, Travis Menish, Gary Collison, Fire Department representative and Chief, Wade Pitt, and Becky Anderson present. Communication continued through 2019 via email and phone calls.

c. *Community Capabilities*

The City of Blencoe has one (1) warning siren with horns facing three (3) directions. Signals can be heard from all points out of doors within city limits and beyond. Signals are sounded through the County Communications center and can be initiated by the city through protocol in place. Blencoe is equipped with a water pump that enables clean water transfer from overflowing drainage ditches to areas less prone to flash flooding. The following table identifies key elements supporting community actions in the event of a disaster.

<b>Plans/Guidance</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Zoning Ordinance</li> <li>• Building Code</li> <li>• Subdivision Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> <li>• Drainage Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
Codes Building Site/Design	
ISO Fire Rating	6-6x effective 6/2019
<b>Staff/Department</b>	
Public Works Official	
Planning/Zoning Boards	
Emergency Response Team	Fire Department & Contracted Services
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Post #665 (Stevens-Kelly)

### Local Funding Availability/Eligibility

- Apply for Community Development Block Grants
- Capital Improvements funding via annual budget process
- Levy taxes for a specific purpose
- Fees for water, sewer, gas, or electric services
- Ability to incur debt through:
  - general obligation bonds
  - special tax bonds
  - private activities

#### *Review of Actions Taken*

Equipment upgrades and additions within community response networks are among actions taken since the previous Plan was completed in 2014. Such additions to assets, programs, and strategies are included in the following status report of proposed actions from the 2014 Plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A formal list is not available. Specified establishments that may effectively serve as a cooling shelter includes the community center/city hall and St Bernard Church.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No distribution program of this nature has been implemented in the City within the past five (5) years; however, the city would support the program should funds be made available.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The city has available a pump to redirect clean water from backed up storm drains/reservoirs/collectors/ditches to alternate areas. Purchase of generators to maintain



operation of City Hall and to enable the Community Center to be used as a refuge location during emergency conditions is among planned projects as included in the Region portion of this plan. Also available are three (3) generators specific for use during response.

The Fire Department has added equipment and continues to do so on an as-needed basis. Included in recent updates are:

- portable pumps
- cascade system air tanks
- foam applicator
- 2 1/2" ground monitor (sprayer)
- 2nd Pool w/1500 gal capacity to fill response tanks
- bunker equipment replaced as needed

The fire department has interest in adding the following equipment as included in the Region listing of Mitigation Actions, Strategies, & Projects:

- ATV for access to grassfires as well as remote areas inaccessible by roads during and immediately following extreme weather conditions

Security procedures have not been changed in recent years, and there are no plans at present to make such changes. Blencoe is interested in assessing the impact of remote entry installation to enable access to refuge locations during a hazardous event. Additional equipment as may be used on-site at critical facilities is necessary. Installation of generators is among planned projects included in the Region listing Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan. Training opportunities for responders is readily available through several agencies and organizations within and outside the Region.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

Status: Property risk does not contribute to need for an acquisition program or policy.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Sewers were added/improved during roadway repairs along the highway within the past two years. Roadways are minimally impacted during flood events.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Blencoe implements Capital Improvements on a case-by-case basis, often determined by urgency of need and availability of funds.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Blencoe does not participate in NFIP as the floodplain sits outside its boundaries. At present, there is no interest in changing participation status.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The City has not implemented or designed a tree planting plan, nor is there immediate interest in doing so. The City will continue to monitor progression of the Emerald Ash Borer Beetle in conjunction with routine park maintenance and public property assessments. Tree Maintenance is governed an ordinance but is limited to right of way. Blencoe has participated in grant programs available locally to replant trees on city properties and plans to continue these efforts. Compilation of a Tree Board is not a practical option for the city. Council will continue to act on tree-related matters as necessary. There is not currently interest in developing an education program related to tree types and planting.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* City Ordinances provide regulatory guidance for subdivisions. Though a standard set of building codes has not been adopted, Council does review permits before approval. As floodplain designation lies outside city limits, floodplain regulations are not in place nor are they expected to be without significant changes in/along nearby waterways.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Due to the rural nature of the community, the City has not considering implementation of burning restrictions, nor is it considering doing so. However, County and State red flag warnings are enforced and communicated to residents.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* No formal awareness campaigns have been implemented at the local level. Promotion of available resources is among Region-wide strategies as noted in the Region portion of this plan.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Blencoe contracts with the County for snow removal on its main access roadways, with local support for arterials. Standard parking restrictions are under ordinance, though the city may continue to consider addition of a snow-specific parking ban.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Though no new shelters have been designated, the City does recognize the benefit of shelter locations at the city parks and campground. Modifications can be made at city hall to allow for more secured refuge. Consideration is on-going based on availability of funds.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Intentional efforts to improve communications have not been implemented by the City though the county-funded Alert Iowa notification system is available to all residents. As use is not widespread, promotion of this service (along with additional actions, strategies, and projects as listed in this section) is included in the Region listing of Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan. While a single siren is present in town, the City recognizes the value of an additional warning siren on the northwest portion of town. No warning system improvements have been made in recent years.

Weather radios are in place at the fire department and information is communicated directly to staff at City Hall when necessary. While weather radios are not an urgent need, Blencoe would like to increase its use of and capacity for 2-way, handheld radio communications.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The above listed actions are not necessarily within the scope of control of the jurisdiction. However, local franchise providers do offer interrupt alerts through cable television service as well as telephone landline service.

#### d. *Risk Assessment*

##### *Contributing Factors*

Geographic location dictates two (2) Blencoe's priority concerns of tornado and severe winter storm. In another aspect, geography serves as a benefit. Blencoe is entirely outside of the

floodplain and therefore situated in a manner that significantly reduces concerns related to river and waterway flooding. However, flash flooding incidents are on the rise. Periods of rainfall on still-frozen ground in addition to extended, heavy seasonal rainfalls contribute to flash flood conditions at a higher frequency than in recent years.

Prospect of train derailment, especially as tracks are impacted by recurring inclement weather conditions, remains a concern, as does the volume of potentially hazardous materials transported on via rail through town. Hazardous materials-related incidents cannot be overlooked for another reason – proximity of grain elevator and propane tanks to anhydrous ammonia storage area, which poses further complications from an incident that may occur while volatile materials are in transport over the road and by rail. More manageable concerns include the pending influx of the Emerald Ash Borer Beetle and heightened risk of grass/wildland fires.

#### *Priority Hazards*

Tornado, Severe Winter Storm, and Flash Flood are primary concerns for the city. Historical tornado activity cannot be countered. Extremes in both winter and summer months is a current trend, though more hazardous events occur in the winter. As mentioned, there is considerable concern for hazardous materials incidents as well.

#### *e. Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## **2. Castana**

### *a. Profile*

The city of Castana is situated near the center of Monona County. State Highway 175 runs north to south through the center of city limits, however most commercial and residential structures are located east of the highway. Maple River runs north to south along the western edge of the city while Cottonwood Creek meanders along the eastern boundary. The two bodies of water are connected near the center of the northern boundary.

*City Governance & Community Supports*

The City of Castana is governed by a five (5) person elected City Council and the Mayor. The only office in addition to the Mayor and Council is that of City Clerk. Emergency services are provided by the Castana Fire and Rescue, operated independent of the City, and staffed by volunteers. Ambulance service is provided through Mapleton Ambulance. Monona County provides law enforcement.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Castana was 147. American Community Survey (ACS) data estimate show the 2017 population at 93, indicating significant population decline. According to the 2013-2017 ACS 5-year estimates, the median household income is \$30,250, which is over \$10,000 less than Monona County, estimated to be \$41,598. Castana’s proportion of individuals living below the poverty level is greater than both Monona County and the state of Iowa.

While the City does have a similar proportion of its population at age 65 or older when compared to Monona County, there are no individuals 5 years of age or younger. This suggests that the population will continue to decline, unless new residents move into the area.

<b>Community Characteristics</b>	
Population (2010)	147
Population (2017)	93
Total Households	49
Median Household Income	\$30,250
Median Household Income – Monona County	\$41,598

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Monona</b>	<b>Iowa</b>
5 years and younger	0	0.0%	4.9%	6.3%
65 years and older	23	24.7%	24.2%	16.0%
Below the poverty level	18	19.4%	14.9%	12.0%
Living with a disability	14	15.1%	13.9%	11.6%

Total housing units in Castana is 72. Of those, 49 are occupied resulting in a 31.9% vacancy rate. This is significantly higher than most communities in the area. Only one house has been built since 1980. The majority of residential structures are 50 or more years old.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	72	
Occupied	49	68.1%
Vacant	23	31.9%
Mobile Homes	1	1.4%
<b>Age of Residential Structure</b>		
Built 2000 or later	0	0.0%
Built 1970 – 1999	11	15.3%
Build 1969 or earlier	61	84.7%

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets:

Property (up to)	\$ 1,061,500
Inland Marine	\$ <u>143,037</u>
<b>Total</b>	<b>\$ <u>1,204,537</u></b>

*Leading Employers*

The city of Castana has some local businesses that employ small staff.

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall/Chestnut Hall	103 Pine St
Community Building	113 3rd St
City Park & related	Willow & 4 <sup>th</sup> Sts

Pump Houses	by Maple River
	by Elevator
Water Tower	South end of 2nd St
New Fire Station	321 Pine St
Old Fire Station	3rd & Pine Sts
Storage Bldgs	320 Pine St
	114 N 3rd St
Garage/Storage	202 3rd St

In addition to valuation of city assets, each of Castana’s proposed Mitigation Actions and Strategies pursued for implementation in the next five (5) years will fully consider protections to privately owned buildings, property, and assets and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation those structures. Those entities are:

*Community Support offices, Vulnerable Populations, &/or Gathering Locations*

Castana Community Church	101 4th Street
Lilly Jack Saloon	301 Ash Street
Timber Ridge Ranch and Winery & Vineyard	33453 153rd St (outside city limits)

Private businesses and organizations play an essential role in the City’s recovery efforts and communication network, and are therefore included in this itemizing of essential or critical facilities. The above list is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis.

*b. Participation*

A planning meeting was held via phone conference with Mayor Kim Yanak representing the City of Castana. Information as provided was contributed to by City Clerk Debra Venteicher and Fire Chief Vince LeClair.



c. *Community Capabilities*

*Capabilities*

The City of Castana has within its jurisdiction, resources and supports that improve its resiliency. Those capabilities are included in the following table. Additional resources as available to the city through county, region, and state departments, by way of agreements, memberships, and programs are outlined in the Monona County and Region portions of this plan.

<b><i>Policies/Ordinance</i></b>	
<ul style="list-style-type: none"> <li>• Drainage Ordinance</li> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> </ul>
<b><i>Programs</i></b>	
Codes Building Site/Design	
NFIP non-participant	CID #190462
ISO Fire Rating	Class 7
Planning/Zoning Boards	
Tree Trimming Program	Included in tree trimming ordinance
<b><i>Staff/Department</i></b>	
Emergency Response Team	Yes, Fire Department
<b><i>Non-Governmental Organizations</i></b>	
<ul style="list-style-type: none"> <li>• American Legion Auxiliary</li> <li>• American Legion Post #507 (Grimsley-Thayer)</li> <li>• GFWC Iowa</li> </ul>	<ul style="list-style-type: none"> <li>• Ladies Aid</li> <li>• Neighborly Pals</li> <li>• Thursday Club</li> </ul>
<b><i>Local Funding Availability</i></b>	
Apply for Community Development Block Grants	
Capital Improvements funding via annual budget process	
Authority to levy taxes for a specific purpose	
Fees for water services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

### *Review of Actions Taken*

Projects completed with mitigation strategy involved in the planning process further improves resiliency and efficiency of operations. Following is the status update of actions and strategies as provided in the 2014 Monona County Multi-Jurisdictional Plan for the City of Castana. All strategies indicated below are considered completed and closed unless a continuation is specified and included in the 2019 compilation of Actions, Strategies, and Projects.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is maintained. Community Building may be used as refuge location.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program is not currently in place. The city would be interested in administering such a program if funded. This project will be reinstated at such time.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* There is not a formal review process in place to assess security procedures and equipment needs. No major upgrades or changes in City assets or procedure have been implemented in recent years. The Fire Department has a generator designated for response efforts. The city has a gator for access to remote locations and for use when road conditions are poor. No additional equipment needs have been addressed or identified for the city or its response team.

Training needs for response teams are met through region, county, and state provisions.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A program is not in place, nor is one expected to be needed, to improve or acquire high risk to flooding properties. Drainage improvements have not been implemented nor are any planned. Designated preservation of natural open space is not necessary at present.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Access on roadways is hindered due to erosion of gravel. No projects outside of routine grading have taken place. However, the City would benefit from improved road conditions.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Capital improvements are based on case-by-case considerations as presented to the Council.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Castana has been issued a CID. However, they are non-participants in the program.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Castana does not have a regimented Tree Planting Plan or Tree Maintenance Plan. Maintenance is addressed within the City Code based on right-of-way responsibility and removal of dead/damaged/diseased trees. Council responds to issues related to trees in lieu of a Tree Board. No tree-specific education programs are available through City departments.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are not referenced within the City Code. It has not been determined to be necessary. Building standards are determined by the county. Major changes and additions, and all septic approvals, go through the County. Floodplain regulations are not applicable to Castana.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Local burn ban restrictions are based on County declarations. There is a tree/yard waste dump intended to limit the need for burning in town.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Information to residents is disseminated through its designated posting locations. No targeted awareness programs are currently in place.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city has an informal plan in place addressing snow route maintenance and general plans for action during snow events.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Storm shelters and respective development plans have not been considered.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city has established means of communicating with residents by way of public postings at City Hall, the Post Office, and the Church. When necessary, notices are distributed door-to-door. No communication lines have been considered in the event of evacuation or other significant disaster that requires alternate methods of communication. The City expects to defer to county communication networks and local media channels. A warning siren is in place and serves as the main method of communicating pending and imminent threats. The siren is sounded by the county and alerts can be initiated by the city.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Castana's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Regional historical record of events support concerns regarding Thunderstorm and Tornado activity. Local concern adds Drought for consideration. Consistent with regional contributing factors, flash flooding and subsequent runoff is becoming a more prevalent concern as seasonal conditions fluctuate between unseasonably warm/cool to record-breaking in the opposite direction within short periods of time. This is particularly a problem with the in-town road network comprised mostly of gravel and sloped. Recent conditions resulted in road closure until rain ceased. Topography as well as geographic location are the dictates for focused concern.

### *Priority Hazards*

The City recognizes the following as priority hazard concerns for Castana.

- Tornado/Windstorm
- Thunderstorm w/Hail & Lightning
- Drought

Flash flooding is a growing concern due to runoff and related roadway and soil erosion. As with most jurisdictions, Earthquake is not a local concern. Topography does increase potential for landslide, but no history of such incidents is recorded in available databases. A Castana was not indicated for comments as received through the public input process.

#### *e. Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## **3. Mapleton**

### *a. Profile*

The city of Mapleton is located in the northeast corner of the Monona County. State Highway 175 runs through the west / northwest portion of city limits, and acts as a part of the western boundary for the section town containing the airport. This section is bound by the Maple River to the east. This river then continues west of Mapleton. Schoenjahn Wildlife Preserve is located along Maple River to the west. Heisler Creek is located north and west of Mapleton.

More information can be found at the [City of Mapleton's website](#).

### *City Governance & Community Supports*

Mapleton is governed by a five (5) person elected council and the mayor. Offices in addition to the Mayor and Council include City Clerk, Public Works, Police, and Fire & Rescue. A Planning and Zoning Board also serves the City. Fire and rescue is provided by the Mapleton Fire Department, which is staffed by volunteers, and serves the surrounding area. The city hosts an ambulance service managed through Burgess. The city does have its own police

department. Law enforcement services are supplemented by the Monona County Sheriff's Department.

The city of Mapleton is a member of the NFIP program. The Municipal Code of Ordinances was last updated in January 2018. The Comprehensive Plan was adopted in 2018.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Mapleton was 1,224. American Community Survey (ACS) data estimate show the 2017 population at 1,229, indicating a generally stable population. According to the 2013-2017 ACS 5-year estimates, the median household income is \$44,779, which is slightly more than Monona County, estimated to be \$41,598. Mapleton's proportion of individuals living below the poverty level is slightly higher than Monona County and the state of Iowa.

Mapleton has a relatively high percent of individuals who are 65 or more years old, at 26%. Furthermore, the percent of residents living with a disability in Mapleton is 17%, higher than the County or State. FEMA identifies both categories as vulnerable populations.

<b>Community Characteristics</b>	
Population (2010)	1,224
Population (2017)	1,229
Total Households	583
Median Household Income	\$44,779
Median Household Income – Monona County	\$41,598

For the purpose of cost-benefit considerations, a valuation of the City's assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

*2019 Valuation of City Assets*

Building \$13,451,403  
 Personal Property \$999,835

EDP - Hardware	\$52,900
Fine Arts	\$40,000
Misc Property Sched	\$501,317
Misc Property Unsched	<u>\$269,633</u>
<b>Total</b>	<b><u>\$15,315,088</u></b>

*Leading Employers*

Mapleton has dozens of businesses that employ small staffs. Leading employers in the city of Mapleton include:

- Maple Valley – Anthon Oto Community School District
- The City of Mapleton

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

Town Hall, Police Dept, & Communications Bldg	513 Main St
Community Center	511 Main St
Fire Station	106 S 2nd St
Fire Bldg #2	48 Courtright
Ambulance, & Mntc Bldg	49 Maple St
Mapleton Public Library	609 Courtright St
City Garage	102 S 2nd St
Maintenance Bldg	109 Front St
City Shop	405 Heisler St.
City Garage/Storage	Maple St
Storage	39 Maple St
	321 Main St
Mapleton Pool & Related	551-599 Sioux St
Mapleton Park & Shelter House	Ring St & S. 7th St
Ball Field & Related	
Pocket Park	
Roadside Park	
Light Plant & Substation	103 S Front St
Sewer Plant & Related	IA-175 & W Ring St



Well Houses	Old Airport
	Willow Vale Golf Club
Water Tower	
Substation	8th & Ring Sts
Pump Station	
Water Treatment Plant	303 IA-175
Sirens	104 Maple
	Chamberlain St
Mapleton Muni Airport & Related	
Willow Vale Golf Club; Club House, & Related	300 Sioux St
Walking Trail	
Mapleton Cemetery	

In addition to valuation of city assets, those of privately owned properties, facilities and personal property, each of Mapleton’s proposed Mitigation Actions and Strategies pursued for implementation in the next five (5) years will fully consider protections to those assets and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation those structures. Those entities are:

Community Supports, Vulnerable Populations, &/or Gathering Locations

Mapleton Elementary School	501 S 7th St
Maple Valley – Anthon Oto High School	
Burgess Family Clinic	513 S Muckey St
Medical Clinic	520 Main St
Maple Heights Nursing Home	2 Sunrise Ave
Post Office	106 S 5 <sup>th</sup> St
Whiting Woods (County Park)	14858 Peach Avenue (outside City Limits)
Heights Home Health Inc.	114 North 4th St, Ste C
Museum of American History	302 S 7th St
Numerous Churches	

Private businesses and organizations play an essential role in the City’s recovery efforts and communication network, and are therefore included in this itemizing of essential or critical

facilities. The list is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis.

**b. Participation**

A planning meeting via conference call was held July 18, 2019 with City Clerk Karla Uhl and Public Works Director Mike Hahn participating. The call was preceded by email contact beginning November 2018 and in-person delivery of a planning packet on April 24, 2019. Follow up communications were conducted via email.

**c. Community Capabilities**

In addition to resources as available through State, Region, and County entities, the City of Mapleton has the following capabilities as locally derived and/or determined.

<b>Plans/Guidance Documents</b>	
2017 Mapleton Comprehensive Plan	
<b>Policies/Ordinance updated: 2015</b> - <a href="https://www.mapleton.com/uploads/Mapleton-City-Code-August-2019.pdf">https://www.mapleton.com/uploads/Mapleton-City-Code-August-2019.pdf</a>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Drainage Ordinance</li> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
Codes Building Site/Design	
National Flood Insurance Program (NFIP) Participant	CID #190208
ISO Fire Rating	Class 7/7X
Planning/Zoning Boards	
Tree Trimming Program	
<b>Staff/Department</b>	
<ul style="list-style-type: none"> <li>• Building Code Official</li> <li>• Building Inspector</li> <li>• Public Works Official</li> </ul>	<ul style="list-style-type: none"> <li>• Ambulance &amp; EMS</li> <li>• Fire Department</li> <li>• Police Department</li> </ul>

<b>Non-Governmental Organizations</b>	
American Legion Post #496 (Loren Hollister)	
Mapleton Community Development Corps	
<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, and electric services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Projects implemented in the past five (5) years may have a considerable effect on Mapleton’s ability to mitigate the effects of natural disasters when actions and strategies as proposed in the 2014 Plan were applied to those projects. Following is a status update. All actions as included in the 2014 are considered closed unless specified here and included in the 2019 list of Region Actions, Strategies, and Projects identified in this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A formal list of cooling stations is not maintained. The nursing home is generally recognized as a refuge location and can be accessed 24 hrs. The community center is open during events.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector distribution program has been implemented in recent years. Some detectors are still available upon request.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A review of security procedures and equipment at critical facilities concluded that no immediate measures were necessary. When needed in recent months, a pump was rented. ~~In a collaborative project with the County, a dedicated generator has been put in place at the Community Center.~~ A collaborative project with the County is being discussed to install a dedicated generator at the Community Center though this project has not been implemented. The Ambulance, Police, and Fire Departments conduct scheduled equipment replacements, though none have been categorized for inclusion in this plan.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Improvements were made to property around the airport to minimize the effects of flooding. Property acquisition has not been deemed necessary. No drainage projects were completed, nor needed, in the past five (5) years. A retention pond was a deliberate addition to the latest housing development as a means of maintaining natural open space. The Mapleton Community Development Corps is interested in designating wetlands to further than initiative.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Roadway access and elevation issues occurred on state highways but none were prevalent in town.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Mapleton does have CIP process in place.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* The City participates in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Post-tornado, Mapleton formed a Tree Board to assess reforestation. Tasks included removal of damaged trees and organizing plantings. In recent years, this has not been a high priority task. The board is currently inactive and tree-related issues are brought before the Council. City Ordinances include basic right-of-way responsibilities for tree maintenance, and reference to certain species that may become nuisances. Education on tree types and planting is not in place. However, if inquiries are made, residents are directed to the County Conservation Board.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision standards are included in the City Code, adopted after the tornado. Building standards have not been reevaluated since the 2014 plan was completed. Not much development has been considered within the floodplain due to designated land use restrictions.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open Burning is restricted by ordinance within the City Code.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* A program dedicated to increasing awareness of vulnerability to hazards and education thereof is not in place, nor is it a priority at present. The city may incorporate some awareness measures as long as no cost is incurred.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A route is in place and is not emergency based. Parking restrictions are declared by the mayor as applicable. No formal snow plan protocol is in place.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Mapleton has not taken action on designing or developing storm shelters since the last plan. Consideration of shelter standards are included in building standards adopted in 2011.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Aside from sirens, no formal communication network has been established to keep residents informed during and after disasters. The City webpage is active and Facebook is typically used for pool updates. There are three (3) warning sirens within city limits. All are controlled through the County Communications Center. They are sounded for high wind and tornado conditions and can be heard throughout the city and beyond.

There is a weather radio at City Hall. Because there is no direct line of communication between City Hall and response teams, means of in-time communications is still needed.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Mapleton's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Available flood maps (<http://ifis.iowafloodcenter.org/ifis/maps/hazard/>) for Monona County are still in draft stage. Based on the draft Flood Hazard Product Map as available through the Iowa Flood Center, Mapleton has 100-year floodplain along its west-to-north border, directly affecting area surrounding the airport runway and hangar, the Golf Course (though mostly indicated at 500-year level), and the commercial/industrial area in between.

##### *Priority Hazards*

The following have been identified as the hazards of priority concern for the City.

- Tornado
- Thunderstorms/Hail
- Severe Winter Storm

Having experienced an EF-3 tornado in 2011 and a lesser tornado in 2008, Mapleton has cause to be wary. Ten (10) tornado events impacted the county since 2001. For 18 events affecting Mapleton as recorded in the NOAA database since July 1, 2014, all but 2019's flood were specific to the prioritized hazards with winter weather and wind being most frequent and overlapping.

#### e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 4. Moorhead

### a. Profile

The city of Moorhead is located in south Woodbury County, just east of center. County Highway E54 and State Highway 183 intersect in the southern portion of Moorhead. Soldier River Cutoff runs along the southeastern city boundary. Jordan Creek is located west of the City. Several miles to the southwest is Preparation Canyon State Park.

#### *City Governance & Community Supports*

Moorhead is governed by a five (5)-person elected City Council and a Mayor. Offices in addition to the Mayor and Council include City Clerk and Fire & Rescue. Fire & Rescue services are provided to the City and surrounding area by the Moorhead Volunteer Fire Department. Monona County provides law enforcement services, and a state patrol officer is located in Moorhead.

The City of Moorhead is a member of the NFIP Program. The Municipal Code of Ordinances was last updated in 2017.

#### *Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Moorhead was 226. American Community Survey (ACS) data estimate show the 2017 population at 211, indicating slight population decline. According to the 2013-2017 ACS 5-year estimates, the median household income is \$32,188, which is nearly \$10,000 less than Monona County, estimated to be \$41,598. Moorhead's proportion of individuals living below the poverty level is much larger than Monona County and nearly double that of the State of Iowa.

Nearly one third of Moorhead's population is 65 years or older and 21.3% of the City's population is living with a disability. Both of these are significantly higher than the County and State. FEMA identifies both of these categories as being vulnerable populations.

<b>Community Characteristics</b>	
Population (2010)	226
Population (2017)	211
Total Households	113



Median Household Income	\$32,188
Median Household Income – Monona County	\$41,598

<i>Vulnerable Populations</i>	<i>Count</i>	<i>Percent</i>	<i>Monona</i>	<i>Iowa</i>
5 years and younger	12	5.7%	4.9%	6.3%
65 years and older	66	31.3%	24.2%	16.0%
Below the poverty level	57	27.0%	14.9%	12.0%
Living with a disability	45	21.3%	13.9%	11.6%

Total housing units in Moorhead is 128. Of those, 113 units are occupied resulting in an 11.7% vacancy rate. Only three residential structures have been built since 1970. The vast majority of housing units are 50 or more years old.

<i>Housing Characteristics</i>	<i>Count</i>	<i>Percent</i>
Total Housing Units	128	-
Occupied	113	88.3%
Vacant	15	11.7%
Mobile Homes	1	0.8%
<i>Age of Residential Structure</i>		
Built 2000 or later	2	1.6%
Built 1970 – 1999	1	0.8%
Built 1969 or earlier	125	97.7%

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets:

Building	\$	680,717
Personal Property	\$	67,240
Property in the Open	\$	<u>12,906</u>
<b>Total</b>	\$	<b><u>760,863</u></b>

### *Leading Employers*

Hosting a handful of small businesses, Moorhead does not have any large-scale employers. However, some businesses are integral to community function and overall wellbeing. Some key businesses are provided for reference.

Holverson Welding and Machine	100 1st St
Café Latte	107 1st St
Moorhead Mini Mart	210 1st St
Bud's Bar & Grill	114 Oak St

### *Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

#### City Facilities (including Parks and City Gathering Locations)

City Hall/Community Center/Library	100-102 Oak St.
Moorhead Fire & Rescue	110 Oak St.
Post Office	116 Oak St.
Office/Gift Shop	119 Oak St
Exhibition Hall	120 Oak St
Sewage Lift Station	1st St
Garage/Storage	212 1st St
Pump House	(Block 9)
Shelter House/Band Shell	(Block 21)
Ball Field & Related	

Each of Moorhead's proposed Mitigation Actions and Strategies pursued for implementation in the next five (5) years will fully consider protections to privately held assets (facilities, personal property, property in the open) and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation of those structures. Some facilities may host vulnerable populations (children, seniors, disable persons) and are therefore significant in mitigation planning. Recreation areas outside the City's jurisdiction and/or privately owned are included among hosts of vulnerable populations. Such entities as described may include the following.

Community Support offices, Vulnerable Populations, &/or Gathering Locations

Bethesda Lutheran Church	703 Pine St
<b>Outside City Limits</b>	
Savery Pond	33787 Plum Ave
Loess Hills Hideaway Cabins and Campground	33774 Plum Ave
Preparation Canyon State Park	340th St
State Patrol	31880 Prepreation

Private businesses and organizations, even when not leading employers, play an essential role in the City’s recovery efforts and communication network, and may therefore be included in this itemizing of essential or critical facilities. The list is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis.

*b. Participation*

A planning meeting was held via conference call with City Clerk Barb Jensen in attendance. Information as provided was on behalf of Mayor Duane Renz, the City Council, and Fire Chief Jacob Archer. A planning packet was mailed out ahead of the meeting and email communications were maintained throughout the completion of this plan. No respondents participating in public input opportunities either online or at the Monona County Fair indicated Moorhead as jurisdiction represented.

*c. Community Capabilities*

<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code and Unsafe Buildings Ordinance</li> <li>• Building Permit Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Residential Zoning Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Trees Ordinance</li> </ul>
<b>Programs</b>	
National Flood Insurance Program (NFIP) Participant	CID #190783
ISO Fire Rating	Class 7/7X
<b>Staff/Department</b>	

Fire Department	
<b>Non-Governmental Organizations</b>	
American Legion Post #365 (Peter A. Hansen)	
<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, and electric services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal designation has been made regarding cooling shelters. Most outdoor facilities have substantial tree shading, and often a structure to provide relief from direct sun. The Community Center and library are available for refuge when open. The Fire station has a locking system that enables controlled entry.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program is not in place, nor has one been implemented in recent years.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Changes/updates in security procedures and equipment at critical facilities have not been implemented. The city has not implemented any significant equipment upgrades. The Fire Department replaces equipment when necessary and upgrades when funds are available. A generator is included for new projects in this plan. Annual required trainings and some supplemental trainings are available through local, region, and state opportunities.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Property acquisition and major improvements are not necessary, as Moorhead has not identified any high-risk properties. To minimize drainage problems, ditch maintenance has moved to scheduled monitoring so action is implemented before overgrowth &/or debris become a problem. Moorhead has a city park and ballfield that preserve natural open space. Its rural nature lends toward sufficient green space.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* No roadway elevation projects have been identified. Access issues have not been an overriding concern.

**Action 2.2.1:** Capital Improvements Program.

*Status:* The City does not have an active capital improvements plan. Projects are determined on a case-by-case basis depending on how the project may affect city operations and cost.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Moorhead is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A Tree Plan/Tree Maintenance Plan is not in place. The City consider adding a formal plan. Replantings are completed when possible, in agreement with property owners. New trees tend toward smaller and flowering varieties. Maintenance is discussed with the Trees Ordinance, with some particulars covered under nuisances. A Trees ordinance is included in the Moorhead City Code. Organized programs providing education on tree types and planting is available through the County Conservation Board, not through City Hall.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are not in place through City Ordinances. Addition of regulations is not considered necessary at this time. Building standards are referenced in the City Code under Building Code and Dangerous Buildings. Building permits are through a controlled process allowing for due consideration. Floodplain regulation is not in place. Flood patterns are monitored to determine if such regulation should be put into place.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open Burning is controlled in terms of nuisance creation and related prohibitions.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* No active awareness program is in place.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow routes are not designated, though an informal schedule for road clearing is implemented as needed. Parking restrictions are not regulated; however, the mayor may issue parking bans as needed.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Local churches offer refuge in the event of severe weather, though they are not likely to have a tornado-certified safety room. The city is not pursuing the addition of formal tornado shelter at this time.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* County Emergency Management Services are the primary go-to for communications to residents and businesses during and after disasters. The city has one warning siren that is sounded through the County Communications Center. The city may initiate a warning to be sounded, but must act through the County. Regional alerts are communicated through participating news networks. Alerts may be received by subscription notification services but none are actively promoted in Moorhead. Weather radios are not in city facilities.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Moorhead's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Moorhead's geographic location is the primary consideration for specific hazard concerns. While not having any reported NOAA Storm Database incidents on record specific to Moorhead, the Monona County zone's frequency is notable in all three of Moorhead's priority hazard categories. Rain/freeze/melt/freezing cycles are wreaking havoc on roadways. Compounded with heavy and extended periods of precipitation, runoff is accelerating damage to roadways and abutting properties. Moorhead's city facilities have suffered hail damage. Other noted concerns include Extreme Heat, Drought, and potential for Landslide. A liquid petroleum bulk station at the edge of town is a new concern for the City. Located between city limits and the river, there is an increase in presence of hazardous materials as well as transport of materials to and from the storage facility.

*Priority Hazards*

- Tornado/Windstorm
- Severe Winter Storm
- Thunderstorm w/Hail & Lightning

As repeatedly referenced, fluctuations between weather conditions from extreme cold to warm are perpetuating flash flooding issues and prolonged instances of standing water where none previously occurred. As this trend continues, flooding may become a higher priority issue.

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.



## 5. Onawa

### a. *Profile*

The city of Onawa is located in the center of the west half of Monona County. State Highway 175 runs east to west, bisecting the City and intersects with Interstate 29 just west of city limits. A few miles outside of town and west of the interstate is Lewis and Clark State Park, Middle Decatur Bend State Wildlife Management Area, Blue Lake, and the Missouri River. East of the City is the Little Sioux River. More information can be found on the City of Onawa website at [www.onawa.com](http://www.onawa.com).

### *City Governance & Community Supports*

The city of Onawa is governed by a six (6) person elected City Council and a Mayor. Offices in addition to Mayor and Council are include the following.

- City Clerk
- Economic Development
- Onawa Fire Department
- Onawa Police Department
- Onawa Public Library
- Parks & Recreation
- Public Works
- Utilities

Fire and rescue services are provided to the City and surrounding communities by the Onawa Fire Department, which is staffed by volunteers. The City is able to provide its own law enforcement. Ambulance service is a full-time, paid service that is provided by Burgess Health Center.

The city of Onawa is a member of the NFIP program. The Municipal Code of Ordinances was last updated in July 2019. The Comprehensive Plan was adopted in 2010.

### *Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Onawa was 2,998. American Community Survey (ACS) data estimate show the 2017 population at 2,849, indicating a generally stable population. According to the 2013-2017 ACS 5-year estimates, the median household income is \$31,089, which is just over \$10,000 less than Monona County estimated to be \$41,598. Onawa's proportion of individuals living below the poverty level is significantly higher than Monona County and the state of Iowa.

Onawa has 475 residents living with a disability, with is proportionally more than the County and State. FEMA identifies this as a vulnerable population.

<b>Community Characteristics</b>	
Population (2010)	2,998
Population (2017)	2,849
Total Households	1,329
Median Household Income	\$31,089
Median Household Income – Monona County	\$41,598

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Monona</b>	<b>Iowa</b>
5 years and younger	62	2.2%	4.9%	6.3%
65 years and older	581	20.4%	24.2%	16.0%
Below the poverty level	721	25.3%	14.9%	12.0%
Living with a disability	475	16.7%	13.9%	11.6%

Total housing units in Onawa is 1,475. Of those, 1,329 units are occupied resulting in a 9.9% vacancy rate. A large portion of the total housing stock is 50 or more years old. Only 5.6% of the housing stock was constructed since 2000.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	1,475	
Occupied	1,329	90.1%
Vacant	146	9.9%
Mobile Homes	3	0.2%
<b>Age of Residential Structure</b>		
Built 2000 or later	83	5.6%
Built 1970 – 1999	374	25.4%
Build 1969 or earlier	1,018	69.0%

More demographic and community data can be found on the U.S. Census webpage for Onawa.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does

not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets:

Building	\$	26,842,377
Personal Property	\$	2,045,144
EDP - Hardware	\$	157,086
EDP - Software	\$	255
Fine Arts	\$	89,350
Misc Property Sched	\$	1,311,618
Misc Property Unsched	\$	<u>378,379</u>
<b>Total TIV</b>	<b>\$</b>	<b><u>30,824,209</u></b>

Leading Employers

There are dozens of businesses within Onawa that each employ small staff. Leading employers for the City include:

- AgriVision
- Bomgaars
- Burgess Health Center
- City of Onawa
- Crossroads of Western Iowa
- Elmwood Care Center
- Fiesta Foods
- McDonalds
- Monona County
- Northwest Area Education Agency
- Stangel Pharmacy
- West Monona Community School District
- Westendorf Manufacturing Co.
- WIPCO Energy (& off-site Solar Field)

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

City Hall/Clerk's Office	914 Diamond St.
Streets/Cemetery Dept & Related	1519 6th St
Police Department/Law Enforcement Center & Lift Station	909 7th St
Fire Station/City Sup't/Maintenance Bldg/Multi-use	1514 6th St
Onawa Fire Department	1025 9th St
Onawa Public Library	709 Iowa Ave

Water Treatment, Generator, Wells,& Related		900-904 8th St
Wastewater Treatment Plant, Main Lift Station & Related		1716 6th St
Sewer Lift Station		1229 8th St
Lift Stations	1200 1st St	22286 248th St
	47 12th St	2300 S Blue Lake
	1111 28th St	2220 Iowa Ave
		142 Maple
Sirens	Iowa Ave & Diamond	20th & Pearl
Pump Houses & Equipment	8th & Jasper	910 8th St
		916 8th St
Main Substation & Related		8th & Diamond
Electric Substation	12th & Emerald	13th & Granite
		Between 3rd & 4th on Diamond
Water Tower		1720 Granite Pl (Hospital Grounds)
Electric Generation Station/Light Plant		1035 8th St
Storage Bldg		1503 10th St
Onawa Swimming Pools & related		200-227 12th St
Gaukel Park, Related Bldgs & Equip		14th & Gaukel Dr
<ul style="list-style-type: none"> <li>• Blacksmith Museum</li> <li>• Church Museum</li> <li>• Depot Museum</li> <li>• Firehouse Museum</li> <li>• Log Cabin</li> <li>• School House Museum</li> </ul>		
Monona County Veterans Memorial Museum		203 N 12th St
Onawa Community Center		320 10th St
Onawa Senior Citizen Center		1017 8th St
Ropes Park & Related Equip/Shelter		1400 2nd St & Maple
Liberty Park & Related Equip/Shelter		13th & Cameo
Generator Bldg		South end of 6th St
Community Theater		910 9th St
Dog Pound & Related		1700 6th St
Skate Park & Related Equip		12th St

County Facilities

Courthouse		610 Iowa Ave
Monona County Fairgrounds		1201-1323 Gaukel Dr
Monona County Arboretum & Conservation Center		318 E Iowa Ave

Each of Onawa’s proposed Mitigation Actions and Strategies pursued for implementation in the next five (5) years will fully consider protections to privately held assets (facilities, personal property, property in the open) and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation of those structures. Some facilities may host vulnerable populations (children, seniors, disable persons) and are therefore significant in mitigation planning. Recreation areas outside the City’s jurisdiction and/or privately owned are included among hosts of vulnerable populations. Such entities as described may include the following.

Community Supports, Vulnerable Populations, &/or Gathering Locations

West Monona Middle School	1314 15th St
West Monona High School	
Lark Elementary School	611 4th
Onawa Headstart Center	307 Jasper St
Burgess Memorial Hospital & Related Facilities/Services	1600 Diamond St
Crossroads of Western Iowa	301 10th St
Dialysis Clinic Inc.	1620 Diamond St Pl
Elmwood Care Center	190 North 15th Street
Elmwood PE, LLC	190 North 15th St
Family Medicine Clinic	1614 Diamond St
Decatur Bend (SW of Onawa)	Cherry Ave & 243rd St.
Kiwanis Museum Complex	203 N 12th St
On Ur Wa RV Campgrounds	22865 Filbert Ave
Onawa Country Club	1825 235th St
Churches:	
Faith Lutheran Church	316 15th St
First Christian Church	722 15th St
St John’s Catholic Church	1009 13th St
Seventh Day Adventist Church	14th Street
Evangelical Free Church	12th street
Community Christ Church	11th Street

Onawa United Methodist Church	1103 13th Street
Kingdom Hall of Jehovah’s Witnesses	1006 Lucas Street
United Pentecostal Church	406 Iowa Avenue

Private businesses and organizations play an essential role in the City’s recovery efforts and communication network, and are therefore included in this itemizing of essential or critical facilities. The list is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis. Key players are identified above; however, some entities may not be specifically included in the interest of minimizing excess content.

*b. Participation*

A planning meeting was held July 24, 2019 via phone conference. Participants included Elaine Miller – City Clerk, Mayor Lonnie Campbell, and Public Works Director John Casady. Communication continued through email correspondence as needed. Informal public input was collected by way of an on-site display at the Monona County Fair. Four (4) respondents indicated Onawa as jurisdiction represented.

*c. Community Capabilities*

The following table shows community capabilities as available at the local level. Resources, supports and programs available at the County level are included under the title IV Counties, part B. Monona County - Profile. Region-wide supports, etc. are provided within the content under title III Region, part C. Capabilities & Resources.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	Capital Improvement Plan
<b>Policies/Ordinance</b> - <a href="http://www.onawa.com/index.asp?Type=B_BASIC&amp;SEC={023EE1FD-CE98-4A8F-B3D7-AA57A9DC6478}">www.onawa.com/index.asp?Type=B_BASIC&amp;SEC={023EE1FD-CE98-4A8F-B3D7-AA57A9DC6478}</a>	
City Code of Ordinances including:	
Drainage Ordinance	Storm Water Ordinance
Floodplain Ordinance	Subdivision Ordinance
Historic Preservation Ordinance	Tree Trimming Ordinance
Nuisance Ordinance	
Zoning Ordinance	Building Code

<b>Programs</b>	
Codes Building Site/Design	NFIP Participant: CID #190463
ISO Fire Rating: Class 4/4Y, eff. 9/1/2014	Tree Trimming Program
Planning/Zoning Board	Zoning/Land Use Restrictions
<b>Staff/Department</b>	
Building Code Official	Public Works Official
Building Inspector	Emergency Response: Onawa FD; Onawa PD; EMS; Burgess Ambulance
<b>Non-Governmental Organizations</b>	
American Legion Post #129 (David McNeill)	
Chamber of Commerce	
Kiwanis	
<b>Local Funding Availability</b>	
<ul style="list-style-type: none"> <li>• Ability to apply for Community Development Block Grants</li> <li>• Ability to fund projects through Capital Improvements funding</li> <li>• Authority to levy taxes for a specific purpose</li> <li>• Fees for water, sewer, &amp; electric services</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to incur debt through: <ul style="list-style-type: none"> <li>general obligation bonds</li> <li>special tax bonds</li> <li>private activities</li> </ul> </li> </ul>

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal listing is in place. The Schools have tornado safe locations and are among facilities that will be made available as refuge locations should there be need to relocate due to mass evacuation. The Community Center is available, as are the library and courthouse, for refuge from inclement weather. The hospital is open with 24-hour access as means of a cooling shelter

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No action has been taken on this item. A smoke detector distribution program is not currently available, nor has one been in place in recent years.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A combined effort between the County and City of Onawa has enabled the implementation of security improvements in recent years. Security cameras have been installed to monitor the following locations: Dump & Fresh Waste Dump, Park, Freedom Rock, museums, Sewer Plant, Courthouse, and Communications Building.

Regarding equipment, **some** backup generators are available for use by City and may be made available to responders. **However, additional dedicated generators would benefit, particularly at the Community Center.** Training is readily available through local, county, region, and state provisions. Response-specific equipment is routinely upgraded to maintain functionality; however, a list of recent equipment improvements/additions has not been provided.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No Property Acquisition Program is in place, nor is one needed at this time. Drainage projects are typically identified and submitted to the Drainage District. Since these actions were initiated in 2014, a few projects have been completed including:

- Addition of storm runoff controls
- Increased water retention measures
- South holding pond near 1st & Granite
- North Holding Pond @ 220th & Holly

Some new areas have been intentionally maintained as greenspace, though no declaration is in place requiring those areas to remain as such permanently. Areas include a new park, extension of an existing park, and designation of a wetlands area along the eastern border of



the city's corporate limits. No further areas have been identified for formal or informal designation to limit development.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* Several Capital Improvement Program projects affecting mitigation have been completed in recent years including drainage-focused repaving @ 20th & Cameo Sts, Cameo St sewer extension, and major work completed at Water Treatment Plant & Electric Generation Station.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* No mitigation-specific projects completed in recent years.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Onawa is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Onawa holds a Tree City USA designation, which requires continual assessment. An estimated 30-40 trees are removed each year and 30-35 added. Strategy in planting is to establish diverse tree population, appropriate for region based on a GIS categorization. A tree committee is in place comprised of citizens and city staff. A plan is in place to address the Emerald Ash Borer Beetle, which necessitates species diversification. Minimal regulation of trees is included in the City Code, which designates maintenance in the Right of Way and prohibits some tree types under nuisances. Formal education program informing on tree types

and planting is not in place. However, the tree committee is able to provide information upon request.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard subdivision regulations are included in the City Code of Ordinances. Building permit issuance includes reference back to State standards. Recent conversation regarding new subdivisions has included runoff concerns. Permits are issued through application process for new and major construction projects, which include setback guidelines. Exceptions are brought through Economic Development (Director) and then to Public Works director. There is no written protocol; however, procedures revert to DNR approval before permits are considered for floodplain development. Floodplain regulations were adopted in 2011 and have not been modified.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Burn restrictions are in place prohibiting burning in public right of way and limiting burning to yard waste (no trash). Red flag warnings as issued at local, county, and state levels are regulated through the Fire Department.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Onawa uses existing networks as means of bringing public awareness of vulnerability to hazards and to provide education. Practices in place include public access channel reminders and those as contracted through local vendors (notification subscriptions). Alert Iowa subscription is still being considered.

**Action 4.1.1:** Additional equipment for emergency response.

*Status:* New since 2014 are handheld radios with a channel designated for City communications and dedicated and portable, City-owned generators. Additional equipment is included in the Region Mitigation Actions, Strategies, & Projects section of this Plan.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* An ATV has been added for improved roadway maintenance of snow routes, funded through the Monona County Community Partners Foundation. Onawa has an established snow plan in place.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No new storm shelters have been added within the city. Several location have been considered, but no developments are in the works.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city has a notable presence on Facebook and has informally designated its page as the key community resource for communication. The community has two (2) warning sirens that adequately reach all points within city limits and beyond. Weather radios are not currently in place at critical facilities. Handheld radios are a primary means of communication between City departments. With warning sirens in place, no further tornado warning system needs have been identified.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Onawa's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

The Iowa DNR Draft Flood Hazard Product Map including the City of Onawa (found at <http://ifis.iowafloodcenter.org/ifis/newmaps/hazard/>) shows floodplain bordering both its east and west boundaries. While imminent river flooding is not a primary concern, elevated ground water tables that may result from River Flooding in turn increases potential for Flash Flooding. Extreme weather as occurred in March 2019 further complicates the City's ability to effectively manage stormwater runoff. Additional contributing factors are noted within the County and Region portions of this plan as such characteristics are common to those corresponding areas.

*Priority Hazards*

The City identified Flooding, Tornado/Windstorm, and Thunderstorm w/Hail & Lightning as priority hazards. Extreme Heat and Severe Winter Weather figure prominently among concerns as well. A comprehensive accounting of reported weather impacts is included in the Region Risk Assessment section of this plan. The public input as submitted at the Monona County Fair was consistent to the City's assessment with Flooding as the most prevalent concern followed by Severe Winter Storm, Thunderstorm w/Hail & Lightning, and Tornado/Windstorm rating equally as next most concerning.

City and public input indicated a fair level of concern for all hazards with the exception of Earthquake and Landslide as minimal or of no concern. Hazardous Materials Incident, Terrorism, and Transportation Incident were frequently added as significant causes for concern.

## 6. Rodney

### a. Profile

The city of Rodney is located near the center of Monona County's northern border. County Highway L12 runs from the southwest to the northeast of the City, with most commercial and residential structures located southeast of the highway. Just outside city limits to the southeast is the Rodney Pits Recreation Area. Southeast of that is the Little Sioux River.

#### *City Governance & Community Supports*

Rodney is governed by a Mayor, City Council, and City Clerk. The city does not have its own fire, police, or ambulance services, and must rely on nearby communities and related contracted services. The City is a member of the NFIP program.

#### *Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Rodney was 60. American Community Survey (ACS) data estimate show the 2017 population at 50. Although this is only a 10-person decrease, proportionally this equates to a 16.6% population decline. According to the 2013-2017 ACS 5-year estimates, the median household income is \$19,375, which is less than half the median income of Monona County, at \$41,598. Despite this, Rodney's proportion of individuals living below the poverty level is in line with Monona County and the state of Iowa.

Based on available census data, there are zero individuals 5 years of age or younger, suggesting that the population will continue to decline unless new residents move to the City. Approximately 28% of the population is age 65 or older. Nearly a third of the population is living with a disability, which is over double the percent of the County or State. FEMA identifies the 65+ age group and individuals living with a disability as vulnerable populations.

<b>Community Characteristics</b>	
Population (2010)	60
Population (2017)	50
Total Households	29
Median Household Income	\$19,375
Median Household Income – Monona County	\$41,598

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Monona</b>	<b>Iowa</b>
5 years and younger	0	0.0%	4.9%	6.3%
65 years and older	14	28.0%	24.2%	16.0%
Below the poverty level	7	14.0%	14.9%	12.0%
Living with a disability	15	30.0%	13.9%	11.6%

Total housing units in Rodney is 29. All structures are occupied resulting in a 0% vacancy rate. This could limit any future growth, and be catastrophic if a hazard destroys any structure. Mobile homes account for 34.5% of the housing stock. Like many surrounding communities, Rodney’s housing stock is aging. However, 4 new residential structures have been added since 2000.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	29	
Occupied	29	100.0%
Vacant	0	0.0%
Mobile Homes	10	34.5%
<b>Age of Residential Structure</b>		
Built 2000 or later	4	13.8%
Built 1970 – 1999	10	34.5%
Build 1969 or earlier	15	51.7%

More demographic and community data can be found on the U.S. Census webpage for Rodney.

*Leading Employers*

Most residents work outside of Rodney. However, the local grain elevator (Koster Grain), Hamann Trucking, and Hamann & Sons are prominent businesses operating in Rodney.

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

The City Garage, City Park, and Community Center are the only listed assets as provided by city representatives in the compilation of this plan. A valuation of City holdings is not readily available.

In addition to City-owned properties, facilities and personal property, each of Rodney's proposed Mitigation Actions and Strategies pursued/considered for implementation in the next five (5) years will take into account protections to privately owned assets and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation those structures. Those entities are:

Community Support offices and/or Gathering Locations include the United Church of Christ (County Highway L12 and Oak Avenue) and County-maintained Rodney Recreational Pit area, which falls outside city limits but falls within the general scope of concern for the City.

Private businesses and organizations play an essential role in the City's recovery efforts and communication network, and could be categorized as essential or critical facilities. The list above is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis.

*b. Participation*

The Rodney planning meeting was conducted via phone conference on May 22, 2019 with Mayor Shawn Hamann, City Clerk Marilyn Hamann, and Councilmember Brenda Hamann participating. The meeting was preceded with a mailed planning packet and included several email communications as follow up.

*c. Community Capabilities*

The City of Rodney is very small and as a result has a nearly non-existent operating budget. Without funds and having minimal ability to pay into loans, the City is limited on what projects can be carried out. Making due with its resources, the City does have the following in place to supplement resources as available within the county and region.

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is in place to identify refuge locations. Due to its size, accessible locations are generally well known by residents.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A program has not been implemented by the City but there is interest in developing one should funds be made available. As the city is served by Smithland Fire Department, a community two miles away, smoke detectors may be the only means of timely response within a burning structure.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The city has reviewed its equipment and security procedures and no significant changes have been made in the last five (5) years. A resident-owned generator has been made available to the City on an as-needed basis. No city-owned equipment has been added for mitigation purposes. The city would still like to have a dedicated generator for use in emergencies. Equipment enabling improved access is not needed. As the City does not host any response teams or equipment, a need for response-specific equipment has not been identified. There is interest in making a storm spotter training availability known to residents.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No need for property acquisition or jurisdiction-level improvements have been identified in Rodney. The City is in the process of mandating routine ditch maintenance as a



necessary mitigation measure. Historically, property owners tend toward reactive maintenance and repairs. The City does need to address roadway drainage. However, funding supports must be secured before moving forward. There is interest in directing more stormwater to the quarry. Action has not recently been taken to designate property for use as open green space, nor is there a plan in place for implementation in the near future.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Capital improvements are determined on a case-by-case basis with funding availability being the primary factor.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* No action has been taken to address frequent occurrences of standing/pooling water on roadways. The City would benefit from continued strategy to address this on-going concern.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Rodney is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The City does not have a formal Tree Planting Plan. A previous mayor provided trees for public plantings. The City is interested in maintaining a healthy tree population and may pursue funding opportunities as available to support those efforts. Tree maintenance is addressed to a limited degree in the City Code of Ordinances outlining responsibility in the right of way, and by inclusion of some tree types under nuisances. Not an imminent concern, the City is not implementing a program to address the Emerald Ash Borer Beetle. Education

on tree types and planting is not offered through the city though some residents may be able to provide professional input on such matters.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are not a current concern for the City. No code specifications are in place referring to established building standards. Mediation measures are more prevalent by way of Rodney's dangerous/dilapidated structures ordinance. The City will continue to evaluate floodplain regulations but no changes are needed at this time.

**Action 2.3.7:** Implement Burn Ban Regulations.

*Status:* The City has not implemented an Open Burn Ordinance but may consider this action.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The City uses its established public posting locations as primary means of communication with residents, but has not included specific awareness or education features. As needed and/or appropriate, the City will send letters to each household. In the event of a natural disaster affecting the city, updates go through County communication outlets and regional new stations. There is one warning siren centrally located in the City Park. It is activated through County Communications Center for tornado and high wind activity. When sounded, the siren can be heard beyond city limits. No action has been taken to ensure placement of weather radios in critical facilities, though future implementation may be

considered. Aside from the siren and self-registered alert systems, no additional tornado warning systems are in place.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A snow removal route is in place, with the County taking care of outlying roads. As congestion is not an issue, there is not a formal Snow Plan addressing parking. Utility issues are assessed during snow removal and can be reported by residents.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No formal storm shelters are in place in Rodney and budgeting for one is not realistic. Public shelter, though not rated for tornado, is available in the restrooms at the quarry.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Rodney's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

The annual budget is supplemented by donations and community grant requests for even minimum maintenance of city facilities and properties. Low/no cost options are ones the City is able to entertain at present. Because routine maintenance is not always in the budget, small issues— such as potholes or cracks in the road, escalate and/or compound other concerns.

Rodney city limits do not include floodplain so flooding concerns are directly related to periods of heavy rain and resulting runoff, especially when ground is frozen or already saturated. Consequently, road deterioration is accelerating. Road repair projects are needed but not currently realistic due to budget constraints.

Following are some considerations for immediate implementation.

- City representatives would like to establish a clear line of communication with the County regarding its warning siren test schedule. Sporadic testing reduces effectiveness of alerts during an actual weather event.
- The City would benefit from resident participation in storm-spotter training to improve local awareness measures.

#### *Priority Hazards*

While flash flooding is becoming an issue, Tornado/Windstorm, Severe Winter Weather, and Drought remain the priority hazard concerns. Dictated primarily by geographic location, the first two categories are concerning due to the extent of potential damage and overall costs for handling clean up and restoration. Drought is significant as it increases chances of fire and the city's lack of access to water to counter such occurrences. Aside from the fire department being in another town, local water supply is well-based, with each property supplying its own water source, further complicating firefighting capability.

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 7. Soldier

### a. *Profile*

The city of Soldier is located near the center of the southeast quarter of Monona County. State Highways 37 and 183 intersect just south of the center of city limits; most commercial and residential structures are located northwest of this intersection. The City is situated west of the Soldier River Cutoff. Oldham Recreation Area is several miles north of Soldier.

*City Governance & Community Supports*

Soldier is governed by a five (5) person elected City Council and a Mayor. Offices in addition to the Mayor and Council include City Clerk and Public Works. The City does not have a police department and relies on the County Sheriffs to provide law enforcement services. Fire services are provided by the Soldier Fire Department, which is staffed by volunteers. Ambulance services to Soldier are provided through Moorhead’s Volunteer Ambulance Service.

Soldier is a member of the NFIP program. The Municipal Code of Ordinances was last updated in 2018. The Comprehensive Plan was updated in 2017.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Soldier was 174. American Community Survey (ACS) data estimate show the 2017 population at 219, indicating mild population growth. According to the 2013-2017 ACS 5-year estimates, the median household income is \$43,958, which is slightly more than Monona County, estimated to be \$41,598. Soldier’s proportion of individuals living below the poverty level is approximately half that of Monona County, at 7.3% and 14.9% respectively.

Soldier has a much higher proportion of individuals age 5 and younger. From a community development perspective, this suggests that the population may continue to grow. However, it should be noted that FEMA identifies this age group as a vulnerable population.

<b>Community Characteristics</b>	
Population (2010)	174
Population (2017)	219
Total Households	89
Median Household Income	\$43,958
Median Household Income – Monona County	\$41,598

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Monona</b>	<b>Iowa</b>
5 years and younger	26	11.9%	4.9%	6.3%
65 years and older	45	20.5%	24.2%	16.0%
Below the poverty level	16	7.3%	14.9%	12.0%

Living with a disability	29	13.2%	13.9%	11.6%
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Total housing units in Soldier is 122. Of those, 89 are occupied resulting in a 27% vacancy rate. This is high compared to surrounding communities. Just over three fourths of the housing stock is 50 or more years old. There have been no new houses constructed since 2000.

<i>Housing Characteristics</i>	<i>Count</i>	<i>Percent</i>
Total Housing Units	122	-
Occupied	89	73.0%
Vacant	33	27.0%
Mobile Homes	7	5.7%
<i>Age of Residential Structure</i>		
Built 2000 or later	0	0.0%
Built 1970 – 1999	30	24.6%
Built 1969 or earlier	92	75.4%

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets:

Building	\$	295,013
Personal Property	\$	83,537
Property in the Open	\$	<u>247,450</u>
<b>Total</b>	<b>\$</b>	<b><u>626,000</u></b>

*Leading Employers*

Solder’s leading employers include the following:

- Community Bank
- Leather & Hawgs
- Ikan Marketing, Inc.
- Soldier Speedy Stop

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities (including Parks and City Gathering Locations)

City Hall/Library	108 Oak St,
Fire Department	210 IA-37
City Park w/campgrounds	200 block of Elm St
Community Building	113 1st St
Water Tower	Main St
Water Treatment (2 lagoons)	East of Co Shed
	SE Corner of Town
City Well	

Each of Soldier’s proposed Mitigation Actions and Strategies pursued for implementation in the next five (5) years will fully consider protections to privately held assets (facilities, personal property, property in the open) and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation of those structures. Some facilities may host vulnerable populations (children, seniors, disable persons) and are therefore significant in mitigation planning. Recreation areas outside the City’s jurisdiction and/or privately owned are included among hosts of vulnerable populations. Such entities as described may include the following.

Community Support offices and/or Gathering Locations

Midway Tavern	206 1st St
Sheri's Book Treasures	208 1st St
Soldier Lutheran Church	223 Lark Street

Private businesses and organizations play an essential role in the City’s recovery efforts and communication network, and are therefore included in this itemizing of essential or critical facilities. The list is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis.

b. *Participation*

A planning meeting was conducted via conference call with Melanie McAndrews in attendance. Information as provided is on behalf of Mayor John Larson, Maintenance Superintendent Jim Lintin, and the City Council. A planning packet was provided prior to the meeting. Email communications have been continued throughout the development of the plan.

c. *Community Capabilities*

In addition to resources available to Soldier through County, Region, Association-based, and State affiliations, the city has tools in place to facilitate resiliency and guide mitigation actions. The following table outlines those capabilities.

<b><i>Policies/Ordinance</i></b>	
<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> <li>• Subdivision Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b><i>Programs</i></b>	
NFIP Participant	CID #190805
ISO Fire Rating	Class 7
Tree Trimming Program	As outlined in Trees Ordinance
<b><i>Staff/Department</i></b>	
Emergency Response Team	Volunteer Fire Department
<b><i>Non-Governmental Organizations</i></b>	
American Legion Post #462 (Soldier Valley)	
<b><i>Local Funding Availability</i></b>	
Apply for Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water and sewer services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>



*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is maintained. During events, the Community Center is available for refuge. The Lutheran Church is always available for heat and other extreme weather incidents.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* Smoke detector program not in place though, the City is interested in implementing if funds are made available.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security procedures and related equipment supports have not been implemented in recent years. The City is interested in two projects relating to this action item that are included in the region listing of mitigation actions and strategies in the plan. However, they are off-site and result in undue hardship for area teams by way of excessive travel to maintain compliance. A generator is in place for the Community Center, and a second for access to lagoon for meter. Trainings and meetings are already available to responses teams. No further need is identified for the use by the City or Fire Dept.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No need for a property acquisition program has been determined. Drainage patterns not currently an issue in the City. Currently, no formal designation of greenspace is necessary.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Roadway access is not typically hindered due to flooding therefore elevation is not necessary. City uses resources as available to clear access ways due to downed trees and debris.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Capital improvements are determined on a case-by-case basis. Long-term projects are determined through the annual budget process.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Though not hindered by floodplain, Soldier does participate in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Restrictions for types of trees to be planted are included in the City Code. Maintenance is relatively informal, with action taken as needed but not on a set schedule. No formal Tree Maintenance Plan is in place. The City Council acts on issues regarding trees in lieu of a Tree Board. The City has Tree Ordinance, and references tree maintenance in the public right of way, and tree types under nuisances. There is not a program in place specifically addressing the education tree types and/or planting thereof.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard subdivision regulations are in place within City Code. The City issues building permits as means of monitoring new construction and major renovation projects. No formal set of standards has been adopted. Having no floodplain within city limits, floodplain regulation is not in place nor is it under consideration.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Per City Ordinances, open burning is not permitted in city limits, but may be allowed under written request during specific weather conditions.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* The City includes awareness notifications within utility billings as deemed necessary. Alert Iowa is used as base to issue alerts.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* No changes have been made in the maintenance of roadway snow routes. A snow plan is in place. It is informal and flexible for changing conditions.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* During public events, shelter is available in the Community Center. At all times, refuge is available at the Lutheran Church. No additional facilities are being considered at present.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Alert Iowa, resident Facebook pages, and the Fire Department Facebook page are informal means of maintaining communication during and following emergencies. The warning siren, text alerts, and email alert systems are in place as community warning systems. Weather radios are not readily available at City Hall or the Fire Department. The City is not considering immediate or urgent action. Soldier has one warning siren, located on City Hall. It is audible within city limits. The City is considering moving the siren to the Fire Department.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Soldier's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Soldier's contributing factors regarding hazard concerns are consistent with most Monona County jurisdictions. Heavy periods of rain, high wind events, and fluctuating temperatures contribute to most of the damages taking place. Flash flooding and related runoff issues are escalating, but they have not yet been noted as a top three concern. Soldier has only one reported weather event recorded in NOAA since July 2014, that indicating thunderstorm and wind. That and County-specific events support Soldier's priority concerns. Some topographical sloping contributes to runoff-driven erosion and damage to roadways. Earthquakes and Radiological incidents do not figure into report of local concerns. All other hazards are cause of some degree of concern.

*Priority Hazards*

- Tornado/Windstorm
- Thunderstorm w/Hail & Lightning
- Sever Winter Storm

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

**8. Turin**

a. *Profile*

The City of Turin is located near the center of Monona County. The majority of the City is located north of State Highway 175. East of city limits, this highway intersects with State Highway 37. Turin is situated between the Little Sioux River to the west and the Maple River to the east. Davis Wetland and Turin Preserve are located north of city limits.

*City Governance & Community Supports*

Turin is governed by a Mayor, City Council, and City Clerk. The city does not have its own fire, police, or ambulance services, and must rely on nearby communities.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Turin was 68. American Community Survey (ACS) data estimate show the 2017 population at 84, indicating possible population growth. According to the 2013-2017 ACS 5-year estimates, the median household income is \$39,688, which is slightly less than Monona County, at \$41,598. Despite this, Rodney's proportion of individuals living below the poverty level is in about half that of Monona County and the state of Iowa.

<b>Community Characteristics</b>	
Population (2010)	68
Population (2017)	84

Total Households	34
Median Household Income	\$39,688
Median Household Income – Monona County	\$41,598

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Monona</b>	<b>Iowa</b>
5 years and younger	3	3.6%	4.9%	6.3%
65 years and older	21	25.0%	24.2%	16.0%
Below the poverty level	5	6.3%	14.9%	12.0%
Living with a disability	10	11.9%	13.9%	11.6%

Total housing units in Turin is 34. All structures are occupied resulting in a 0% vacancy rate. This could limit any future growth, and be catastrophic if a hazardous event destroys any structures. The majority of residential structures are 50 or more years of age, composing 88.2% of the total housing stock. Only four houses have been constructed since 1970.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	34	
Occupied	34	100.0%
Vacant	0	0.0%
Mobile Homes	0	0.0%
<b>Age of Residential Structure</b>		
Built 2000 or later	2	5.9%
Built 1970 – 1999	2	5.9%
Build 1969 or earlier	30	88.2%

More demographic and community data can be found on the U.S. Census webpage for Turin.

For the purpose of cost-benefit considerations, a valuation of the City’s assets may be compiled based on its insured properties, personal property, and facilities.

#### *Leading Employers*

There are no large-scale employers within the City of Turin. Although a couple businesses employ a small staff, most employed residents work outside of town.

- Second Turin
- New Co-op

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities (including Parks and City Gathering Locations)

Community Building	115 Wolfe St
City Park	
City Wells	
Maintenance Shed (shared property w/County)	
Well & Pump Station	btw IA-175 & Elm
R.T. Reese Cabin	22171 Larpenteur Memorial Rd <i>(overseen by Co Conservation Bd)</i>

Projects implemented to improve Turin's resiliency in the event of disaster must take into account the valuation of city assets as well as that of privately held facilities, personal property, and property in the open. Projects submitted for funding supports will include a cost-benefit analysis specific to the assets protected by planned strategies.

*Community Support offices, Vulnerable Populations, and/or Gathering Locations*

- Turin United Methodist Church, 219 Wolfe Street

Private businesses and organizations play an essential role in the City's recovery efforts and communication network and may be categorized as essential or critical facilities. The list is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis.

*b. Participation*

A planning meeting was conducted via phone conference on July 24, 2019. In attendance were City Clerk Cinda Orr and Mayor David Poole. A planning packet was mailed prior to the meeting. Email communications were maintained through the development of this plan.

*c. Community Capabilities*

In addition to county, region, and state resources, Turin has implemented local supports to enable community resiliency.

<b>Policies/Ordinance – 2010</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Floodplain Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Tree Trimming Ordinance</li> </ul>
<b>Programs</b>	
NFIP Participant	CID #190951
<b>Staff/Department</b>	
Fire & Rescue	Castana; Onawa
EMS	Onawa Ambulance; Mapleton Ambulance
<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Actions and strategies were designated for each jurisdiction in the 2014 Monona County Multi-Jurisdiction Hazard Mitigation Plan. Following is the status update for Turin. Each action and strategy is considered closed unless otherwise noted and included in the listing of 2019 Hazard Mitigation Actions, Strategies, and Projects in the Region portion of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal listing is maintained. The Community Center serves as refuge when opened and can be opened as needed.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program is in place.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.



**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A second warning siren has been put into place by way of a county collaboration. A further review/update of security procedures and equipment is not needed. As there is not a local emergency response team, no equipment is needed for such services.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* There are no current issues dictating need for improvements or property acquisitions due to flooding. Washout has not been an issue, therefore no drainage improvements made in recent years; none planned. Davis Wetland and Turin Preserve sit just outside city limits. Further designation of properties is not currently needed.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* No roadway access and elevation projects within Turin's jurisdiction have been completed, nor or any needed.

**Action 2.2.1:** Capital Improvements Program.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Capital improvement projects are determined on a case-by-case basis.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Turin maintains participation in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

**Status:** Turin does not have a specified Tree Planting Plan. Tree maintenance is conducted as needed, but no scheduled program is in place, nor needed. The City has a small population of Ash trees and is monitoring them for potential Emerald Ash Borer Beetle. Removal will be assessed as needed. Council acts on matters concerning trees in lieu of a tree board. City Code contains standard language addressing tree maintenance in public right of way. No education programs are in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

**Status:** Standard language regulating subdivision development is included in the City Code. Construction and major remodel projects are brought before council, with permits issued by the clerk. Floodplain regulations are not currently in place nor are they expected to be needed.

**Action 2.3.7:** Implement Burning Ban Regulations.

**Status:** The City does not regulate open burning except within terms of creating a nuisance.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Status:** No current programs in place specifically geared toward increasing public awareness of vulnerability to hazards or education. City may use PSA through local new networks and Facebook to communicate to community at large as needed.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* An informal process in place for snow route maintenance. Street parking is banned November through March.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* There is not a designated tornado shelter intended for public access in Turin. Most residents use basement. For lesser inclement conditions, the City Park has a shelter and cinder block restroom building that may serve as refuge.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* While the City is looking to improve communications, current use of the City Facebook page will continue. Two warning sirens are in place in Turin due to a collaborative effort with the County EMA coordinator. The sirens are the primary means of communicating imminent threat. They are sounded by the county but can be initiated at the local level the County Communications Center.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Turin's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Turin is surrounded by floodplain on the west and south borders, and bisecting the lower east side. The only reported weather event specific to Turin in the NOAA database in the last 5 years is Hail (June 2019). As an agricultural community, loss due to drought is a significant cause of concern.

*Priority Hazards*

- Sever Winter Storm
- Tornado/Windstorm
- Drought

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

9. Ute

a. *Profile*

The city of Ute is located near the center of the eastern boundary of Monona County. State Highways 141 and 183 intersect near the center of town. Just outside city limits to the southwest, East Soldier River splits. These two cutoffs flow west and south of the City. Rock Creek is located south of Ute.

More information can be found on the City of Ute website at <http://cityofute.com/>.

*City Governance & Community Supports*

Ute is governed by a five (5)-person elected City Council and Mayor. The Mayor appoints a Mayor Pro-Tem. Offices in addition to the Mayor and Council include City Clerk, City Attorney, Fire Department, and Utilities. The City is also supported by several boards and committees including: Planning and Zoning Committee, Board of Adjustment Committee, and Library Board. Fire and Rescue services are provided by the Ute Fire Department, which is staffed by volunteers. Monona County Sheriff provides law enforcement services.

The city of Ute is not a member of the NFIP program. The Municipal Code of Ordinances was last updated in 2017. The Comprehensive Plan was adopted in 2018.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Ute was 374. American Community Survey (ACS) data estimate show the 2017 population at 392, indicating very slight population growth. According to the 2013-2017 ACS 5-year estimates, the median household income is \$37,396, which is less than Monona County, estimated to be \$41,598. Ute’s proportion of individuals living below the poverty level is slightly lower than Monona County and the state of Iowa.

Ute has slightly higher proportions of its populations ages 5 years and under and 65 years and over. Additionally, the percent of Ute residents living with a disability is higher than both the County and the State. All three of these categories are identified by FEMA as vulnerable populations.

<b>Community Characteristics</b>	
Population (2010)	374
Population (2017)	392
Total Households	195
Median Household Income	\$37,396
Median Household Income – Monona County	\$41,598

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Monona</b>	<b>Iowa</b>
5 years and younger	32	8.2%	4.9%	6.3%
65 years and older	109	27.8%	24.2%	16.0%

Below the poverty level	42	10.7%	14.9%	12.0%
Living with a disability	73	18.6%	13.9%	11.6%

Total housing units in Ute is 237. Of those, 195 units are occupied resulting in a 17.7% vacancy rate. This is high for the area. Over two thirds of the housing stock was constructed 50 or more years ago. Only 7 structures have been added since 2000.

<i>Housing Characteristics</i>	<i>Count</i>	<i>Percent</i>
Total housing units	237	
Occupied units	195	82.3%
Vacant units	42	17.7%
Mobile Homes	1	0.4%
<i>Age of residential structure</i>		
Built 2000 or later	7	3.0%
Built 1970 – 1999	66	27.8%
Build 1969 or earlier	164	69.2%

More demographic and community data can be found on the [U.S. Census webpage for Ute](#).

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets:

Building	\$	1,524,582
Personal Property	\$	528,680
Property in the Open	\$	<u>303,857</u>
<b>Total</b>	\$	<b><u>2,357,119</u></b>

*Leading Employers*

The city of Ute has no large-scale employers; however, dozens of businesses employ small staffs. Some businesses are also considered significant in terms of gathering places and/or

contributing to the overall function and wellbeing of City operations. Included for consideration are the following.

- Ada J Steakhouse
- Ampride 2
- Community Bank
- New Co-op
- Spare Time
- Ute Tire & Automotive
- Valley Ag
- Valley Electric

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities (including Parks and City Gathering Locations)

City Hall/Public Library	130 Main St
Fire Department/Ambulance Services	141 E Main
Post Office	100 E Main St
City Park & Related Equipment/Structures	422 E Main St
Water Tower	E Main St @ S Day Ave
Treatment Plant & Various; Pump House, etc.; Public Restroom	E 7th St
Gazebo	121 E Main
Ute Community Bldg	313 S Monona Ave
Lift Stations	230 E 7th
	626 S Smith Ave
	210 E 7th St

In regard to Ute’s valuation of assets and valuation of privately owned properties, facilities and personal property, each of Ute’s proposed Mitigation Actions and Strategies pursued for implementation in the next five (5) years will fully consider protections to those assets and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation those structures. Those entities are:

Community Support offices and/or Gathering Locations

St Paul's Lutheran Church	303 E 4th St
Ute Senior Housing Complex	300 S Riddle

Private businesses and organizations play an essential role in the City’s recovery efforts and communication network, and could be categorized as essential or critical facilities. The above lists are not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis.

*b. Participation*

The City of Ute participated in a planning meeting on-site at City Hall on July 22, 2019. City Clerk Leah Schwery was in attendance and provided information on behalf of the city, Mayor Richard Hageman, Fire Chief Gary Goslar, and Public Works Superintendent Lonnie Carlson. Additional communications regarding the city were conducted via email.

*c. Community Capabilities*

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	Strategic Plan in place to guide economic dev & community growth
<b>Policies/Ordinance - <a href="https://cityofute.com/index.php/permits-and-ordinances/">https://cityofute.com/index.php/permits-and-ordinances/</a></b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
NFIP non-participant	CID #190464
ISO Fire Rating (not updated)	Class 7
Planning/Zoning Commission	Board of Adjustment
	Zoning/Land Use Restrictions
Tree Trimming Program	
<b>Staff/Department</b>	
Building Code Official	City Clerk and/or Mayor
Building Inspector	City Clerk and/or Mayor
Emergency Response Team	Fire and EMS
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Post #0442 (Abby Post)
	Veterans of Foreign Wars Post 5605
Community Organizations	
<ul style="list-style-type: none"> <li>• Ute Community Club</li> <li>• Ute Development Corporation</li> </ul>	<ul style="list-style-type: none"> <li>• Ute Garden Club</li> <li>• 4-H (w/Mapleton)</li> </ul>



<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is maintained. A few structures are locally recognized as refuge locations, though none are termed for tornado-grade events. Included are the Fire Station (most secure) and residents at the senior housing complex are directed to the Lutheran Church.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* Though dates are not available, a smoke detector distribution program has been in place in the recent past, and administered through the Fire Department. There is no such program currently active.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A review of security procedures and equipment at critical facilities did indicate some equipment improvements and/or additions may be needed. No specific actions have been taken to complete security updates, but they do remain under consideration.

Generators were of interest in the 2014 Plan for use in critical facilities, resulting in the addition of a generator to the Fire Department. A current project is underway that includes waterworks and a water tower with a dedicated generator as part of that project. Interest in generator availability for critical facilities is still effective.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Major improvement and property acquisition program are not necessary. The city is actively addressing drainage with road repairs and culvert replacement. No need for intentional designation of Natural Open Space for reservation has been established.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Eleven (11) areas were identified for roadway drainage improvements. Included are: area between E Reed & E Hartigan Sts, 2 sections @ 6<sup>th</sup> St, and in the Water Plant area. Additional areas to be considered within mitigation actions as laid out in this plan are included in the Region listing of Mitigation Actions, Strategies, & Projects.

**Action 2.2.1:** Capital Improvements Program.

*Status:* A formal CIP is not in place; improvements are made on a case-by-case basis, based on a schedule of needs.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Ute has an ID number for NFIP participation as a precautionary measure. However, floodplain nearest city limits is at 500-year flood level and well outside city boundaries.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The city does have a basic plan established for tree planting/maintenance, with 2-4 trees planted annually. Council is interested in creating a fiscal set-aside to fund 50% removal of tree population (mostly Ash trees). Council acts on tree-related concerns in lieu of a Tree Board. City ordinances include basic language addressing tree maintenance in the public right of way as well as prohibited species due to likely creation of nuisance conditions. As with Hazards education, no program for education on tree planting/types is in place. City is considering promotion of such information.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* City Code contains a basic set of subdivision regulations. The permit process provides some regulation to building standards, though no formal set has been adopted. Projects are brought to mayor and building administrator, then to Council before permit is issued. Floodplain regulation is not applicable to Ute's core planning boundaries.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open Burn restrictions are in place.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* No targeted education programs are directed by the city regarding vulnerability to hazards &/or awareness. City is considering increased efforts as a new project.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city has some guidance in its ordinances about winter parking and snow route access. An informal snow plan is in place.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Development plans for the city do not include addition of tornado-safe shelter. Refuge locations are discussed in item 1.1.1 new or reinforced structures are not being considered as stand-alone projects.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Ute has in place some means of routine communication with residents, including the city website and some social media venues. They do initiate periodic updates and informational items to residents through these networks. They are considering a planned or scheduled improvement to better establish familiarity of where to find info for residents.

One warning siren is in place at city center. It is sounded by County communications and can be initiated by request from the city. When sounded, warning is effective throughout the city for those out-of-doors. Weather radios are not in place. Primary communication for response teams is via two-way handheld radio. City Hall is not on that communication network. Expanding network to include city offices would be beneficial, though funding is not readily available. Information is currently provided between responders and city hall via personal text message and is fairly informal. No additional warning sirens are being considered.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Ute's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Ute has just one record of reported weather events in the NOAA database in the past 5 years, that being for the region-wide experience of flood in March 2019. Flash flood and resulting washout has had the greatest impact on city infrastructure.

*Priority Hazards*

- Thunderstorm w/Lightning & Hail
- Severe Winter Storm
- Extreme Heat

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 10. Whiting

a. *Profile*

The city of Whiting is centrally located in the northwest quarter of Monona County. County Highways K45 and E24 intersect near the center of the City, with most commercial and residential structures located west of the intersection. The City is located several miles east of Interstate 29. McCandless Cleghorn Ditch meanders north to south through the western portion of city limits. More information can be found on the City of Whiting's website.

*City Governance & Community Supports*

Whiting is governed by a five (5)-person elected City Council and a Mayor. Offices in addition to Mayor and Council include City Clerk, Maintenance Engineer, Fire, and Police. Fire and rescue services are provided by the Whiting Fire Department, which is staffed by volunteers. Whiting does have a police officer on staff, however, law enforcement services are supplemented by the County.

The City of Whiting is a member of the NFIP program. The Municipal Code of Ordinances was last updated in 2015.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Whiting was 762. American Community Survey (ACS) data estimate show the 2017 population at 918, indicating population growth. According to the 2013-2017 ACS 5-year estimates, the median household income is \$44,792, which is just more than Monona County, estimated to be \$41,598. Whiting’s proportion of individuals living below the poverty level is in line with Monona County and the state of Iowa.

Whiting has a slightly higher percent of its population that is 5 years of age or younger. From a community development perspective, this may indicate continued population growth. However, it should be noted that FEMA does identify this age group as a vulnerable population.

<b>Community Characteristics</b>	
Population (2010)	762
Population (2017)	918
Total Households	347
Median Household Income	\$44,792
Median Household Income – Monona County	\$41,598

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Monona</b>	<b>Iowa</b>
5 years and younger	80	8.7%	4.9%	6.3%
65 years and older	165	18.0%	24.2%	16.0%
Below the poverty level	133	14.5%	14.9%	12.0%
Living with a disability	90	10.7%	13.9%	11.6%

There are 382 total housing units in Whiting. Of those, 347 are occupied resulting in a 9.2% vacancy rate. Over 70% of the current housing stock is 50 or more years old. In the last 20 years, 20 new structures have been added.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	382	-
Occupied	347	90.8%
Vacant	35	9.2%
Mobile Homes	26	6.8%
<b>Age of residential structure</b>		
Built 2000 or later	35	9.2%
Built 1970 – 1999	78	20.4%
Build 1969 or earlier	269	70.4%

For the purpose of cost-benefit considerations, a valuation of the City’s assets may be compiled based on its insured properties, personal property, and facilities. The value as has not been provided by the city. Whiting does not have projects planned that are expected to go through the Pre-Disaster Mitigation program. Should that change, a cost-benefit will be completed including the valuation of all city assets.

*Leading Employers*

Whiting has dozens of businesses that employ small staffs. Leading employers in the city of Whiting include:

- Whiting Community School District
- Pleasant View Health Facility

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities (including Parks and City Gathering Locations)

City Hall (Clerk’s Office)	605 Whittier St.
Fire Department	513 Whittier
Public Library	407 Whittier St.
Whiting Elementary School	606 West St

Whiting Senior High School	606 West St
Pleasant View Assisted Living	200 Shannon Dr
Pleasant View Care Center	200 Shannon Dr
Badger Lake State Wildlife Management Area	outside city limits

In addition to City valuation, that of privately owned properties, facilities and personal property, also contributes to overall protected benefit when mitigation projects are considered. Each mitigation action, strategy, and/or project pursued for implementation in the next five (5) years will fully consider protections to those assets and to the residents therein. Furthermore, privately owned facilities that offer services and support during times of crisis may be specifically included in mitigation actions and/or strategies receiving municipal-funded support to maintain function and operation those structures. Some notable entities are shown.

*Community Support offices, Vulnerable Populations, and/or Gathering Locations*

Pleasant View Care Center and Assisted Living	200 Shannon Drive
Whiting Christian Church	716 West Street
First Congregational United Church of Christ	429 Whittier Street

Private businesses and organizations play an essential role in the City’s recovery efforts and communication network, and are therefore included in this itemizing of essential or critical facilities. The list is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis. Key players are identified. However, some entities are not specifically included in the interest of minimizing excess content.

*b. Participation*

An on-site planning meeting was held in Whiting on July 23. In attendance were Chad Bell, Public Works and Ron Fremont, City Council, and City Clerk Marie Bruns-LeClair. Communication remained open via email through the development of this plan. Of those submitted, no survey respondents indicated Whiting as their jurisdiction.



c. *Community Capabilities*

The community has at its disposal resources as available through the county, region partners, and the State of Iowa. It has the following capabilities and supports in place specific to local needs.

<b>Policies/Ordinance (2015)</b> @ <a href="https://drive.google.com/file/d/0B4mxG9pLGSPRMld1dGl1eXRXUzg/view">https://drive.google.com/file/d/0B4mxG9pLGSPRMld1dGl1eXRXUzg/view</a>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Drainage Ordinance</li> <li>• Storm Water Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Zoning Districts</li> </ul>
<b>Programs</b>	
Codes Building Site/Design	Via structured building permit process
National Flood Insurance Program (NFIP) Participant	CID #190684
ISO Fire Rating	Class 7/7X
<b>Staff/Departments</b>	
Public Works Official	Street Superintendent
Emergency Response Team	Fire, Police Chief, and EMS
<b>Non-Governmental Organizations</b>	
Emery Johnson American Legion Post #481	
<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water & sewer services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Actions taken based on the previous Hazard Mitigation Plan contribute to a community’s ability to remain resilient in the event of a natural disaster. Following is a status update on measures recommended in the last plan. While some ongoing strategies are referenced within this context, a full list of planned and potential projects is provided in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G. Where action items are

contingent upon or directly related to other items, they are grouped together to minimize repetitive content.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A formal list is not maintained. Refuge can be sought at the Community Center, City Hall, and Library. The City is aware of its proportionately high number of residents residing in modular or trailer homes.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program is not available to through the City and they are not aware of such program through the Fire Department.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Funding limitations did not allow for city equipment purchases on this item. However, the city is still interested in safety-focused measures including remote access options and security cameras. EMTs meet certification and maintenance training through local, county, and regional training opportunities. The city and its emergency response teams would benefit from additional funding supports for training and equipment upgrades.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The city has deemed property improvements and/or acquisition within the floodplain to be unnecessary at this time. To address flooding and overflow, the city practices scheduled maintenance of ditches to prevent clogging before it becomes an issue. At the time of the planning meeting, some areas had just been completed with others identified for clearing. The soccer fields and parks are designated for recreation in order to maintain natural open space within city limits.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* No action has been taken on this item. However, there is potential to plan a low priority project to correct the dip in the road on Whittier at the Bertram intersection.

**Action 2.2.1:** Capital Improvements Program.

*Status:* A formal program not is in place; improvements are made on a case-by-case basis

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* The city does participate in NFIP. However, the program is not particularly relevant to planned local activity.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Whiting participates in Trees Please annually, planting 6-8 trees per year. Whiting has a Tree Board that is directly related to the Trees Please program and guide related activity. City Code includes basic right of way maintenance requirements. A resident volunteer conducts a routine assessment specific to Ash trees to mitigate the impacts of the Emerald Ash

Borer Beetle. The Whiting Library hosts programs providing education on tree types and planting. PSAs as means to increase that educational opportunity are a potential project.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard subdivision regulations are included in the City Code, and no need has been determined for revision. A set of building standards has not been adopted, nor is it currently under consideration. Floodplain regulation is not currently in place.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Restrictions on content for open burning are in place. Residents are encouraged to bring yard waste to the staffed City landfill/brush dump.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* The City actively promotes subscription to the Alert Iowa system. They use their website and city Facebook page to communicate specific information to residents. In addition to designated posting locations and traditional methods, the city uses Facebook for public notices.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city has a designated snow route maintenance and snow plan including an on-street parking ban November 1 to April 1.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Tornado-designated shelters are not currently in place, nor are they planned. Furthermore, cinderblock buildings at the park have been locked due to vandalism. This is another area where camera monitoring and remote access may be beneficial in terms of improving resiliency.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city communicates through its Facebook and city website pages. Radio announcements (as used for boil alerts, for example) may be incorporated for community updates during and after events. Local media stations are also standard go-to venues for residents seeking information. The city has a warning siren that is sounded during high wind and tornado conditions. It is sounded through the County Communications Center, and alerts can be initiated at the city, through the CCC. Weather radios are not in place at City Hall or in city facilities in general. City Hall is connected with the FD through handheld radios as means of maintaining communication, awareness, and support as needed. No additional needs have been identified regarding tornado-specific warning systems.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Whiting's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Floodplain is indicated along the northwest and western borders of Whiting, including some developed properties. The large floodplain area may not always be flooded in high river conditions; however, ground saturation and frequency of high water table may routinely impact the community.

Whiting has a relatively large population living in trailer and modular homes, affecting its resiliency in high wind and tornado incidents, as well as any extreme weather conditions. Vandalism has resulted in locking of park facilities that may otherwise serve as shelter from sudden inclement weather conditions.

*Priority Hazards*

Whiting has identified the following hazards as their top three concerns based on likelihood of occurrence as well as potential and historical damages due to named events.

- Flooding
- Tornado/Windstorm
- Severe Winter Storm

e. *Mitigation Actions & Strategies*

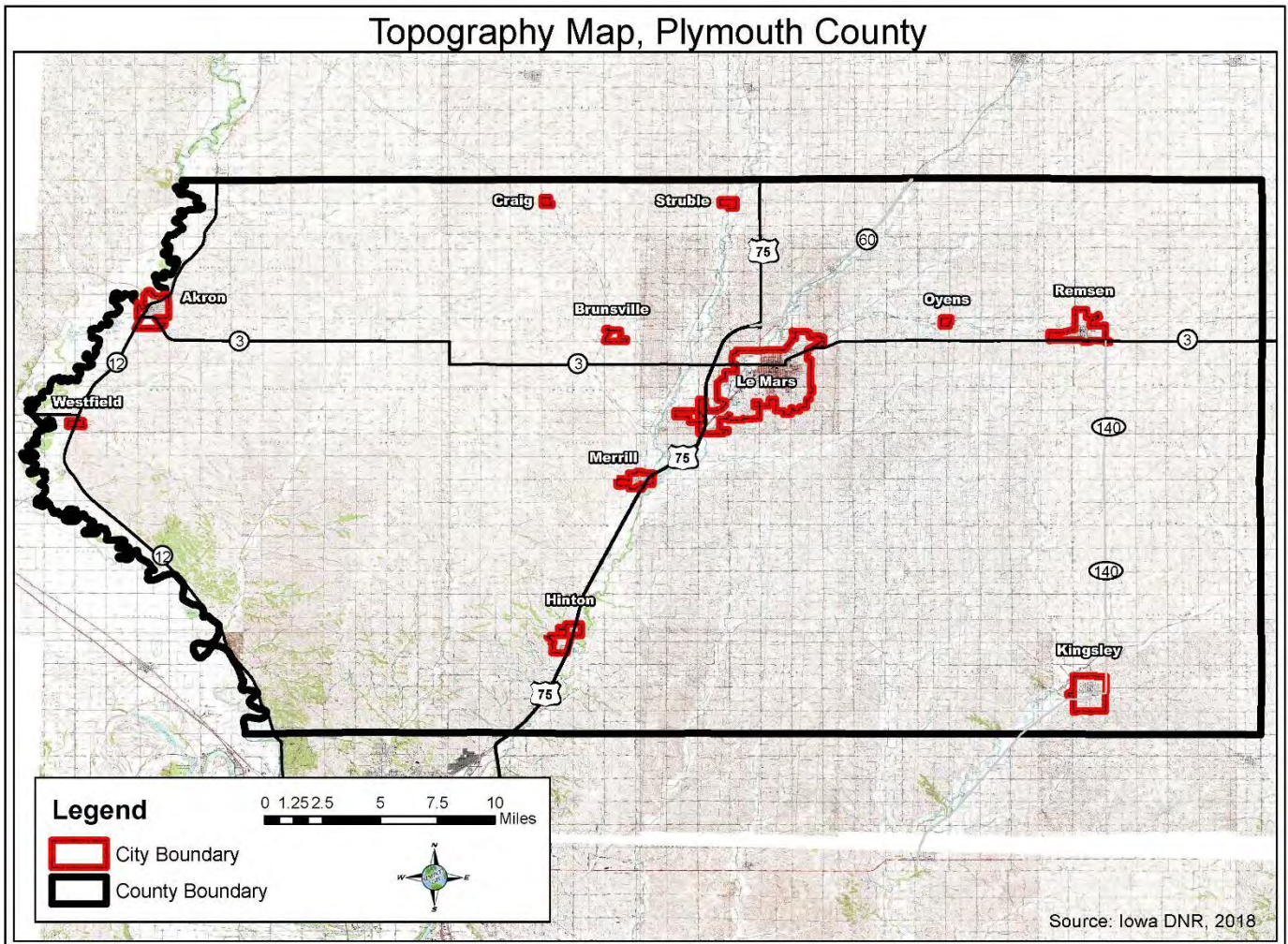
Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## D. Plymouth

### Profile for County & Unincorporated Areas

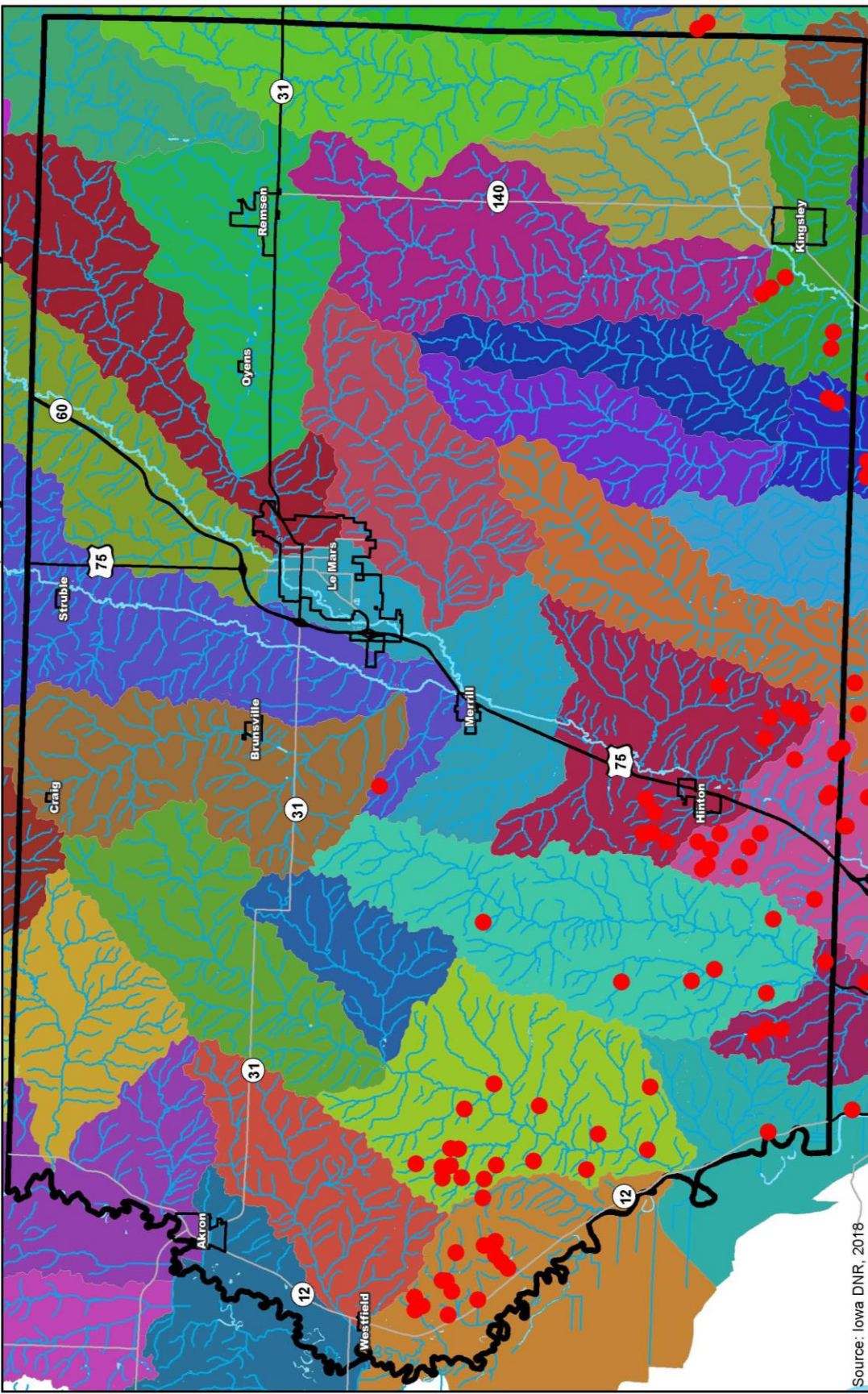
Plymouth County is located in the west half of the northwest quarter of Iowa. The County is bordered by Sioux County to the north, Cherokee County to the east, Woodbury County to the south, and the state of South Dakota to the west. Plymouth County is approximately 864 square miles.

Cities within Plymouth County include Akron, Brunsville, Craig, Hinton, Kingsley, Le Mars, Merrill, Oyens, Remsen, Struble, and Westfield.





# Watershed and Water Resource, Plymouth County



Source: Iowa DNR, 2018

### Legend

- |  |                          |
|--|--------------------------|
| Deep Creek                                       | Streams and Creeks       |
| Beaver Creek-Big Sioux River                     | Other Principle Arterial |
| Big Sioux River                                  | Minor Arterial           |
| Big Whiskey Creek                                | Dam                      |
| Broken Kettle Creek                              |                          |
| Bull Run   |                          |
| Carter Creek-Floyd River                         |                          |
| Graniteville Creek-Willow Creek                  |                          |
| Headwaters Broken Creek                          |                          |
| Headwaters Deep Creek                            |                          |
| Headwaters Mud Creek                             |                          |
| Headwaters West Fork Little Sioux River          |                          |
| Indian Creek                                     |                          |
| Johns Creek                                      |                          |
| Lower Skimle Creek                               |                          |
| McHanney Creek                                   |                          |
| Mink Creek                                       |                          |
| Mud Creek  |                          |
| Perry Creek                                      |                          |
| Pierson Creek                                    |                          |
| Plymouth Creek                                   |                          |
| Richland Creek-Big Sioux River                   |                          |
| Rock Creek-Big Sioux River                       |                          |
| Town of Sney-Floyd River                         |                          |
| Union Creek                                      |                          |
| Village of Kingsley-West Fork Little Sioux River |                          |
| Village of Merrill-Floyd River                   |                          |
| Village of Pierson                               |                          |
| West Branch Floyd River                          |                          |
| West Branch Perry Creek-Perry Creek              |                          |
| Westfield Creek                                  |                          |
| Whiskey Creek                                    |                          |
| Willow Creek                                     |                          |
| Lakes  |                          |
| Major River                                      |                          |





### *Rivers & Watersheds*

The western border of Plymouth County follows the Big Sioux River. Other significant rivers in the County include the Broken Kettle Creek, Floyd River, Perry Creek, and the West Fort of the Little Sioux River.

There are five (5) watersheds within the County that drain storm water and snow melt into streams and lakes, wetland areas, or into groundwater reserves. These watersheds are Blackbird-Soldier Watershed, Floyd Watershed, Little Sioux Watershed, and Monona-Harrison Ditch Watershed, and Lower Big Sioux Watershed. Regional breakdown for watersheds is provided in *Planning Area* information. The following map depicts the sub-watersheds within those as listed above. Sub-watersheds are determined based on hydrologic unit code (HUC) level 12, which includes more detail including tributary data.

### *Landform Regions & Geology*

Plymouth County is composed of three (3) distinct landform regions, which include Northwest Iowa Plains, Southern Iowa Drift Plains, and Loess Hills.

The Missouri Alluvial Plain was formed by erosion and sediment deposits resulting from the Missouri River. This landform region is characterized by backwater sloughs and oxbow lakes. There is also greater potential for flooding within this region.

The other three landform regions were formed by ancient glaciers. The Northwest Iowa Plains and Southern Iowa Drift Plains are marked by rolling hills that are the result of the manipulation of glacial sediment deposits by glacial melt and streams. The Loess Hills are unique to the region, and begin in Plymouth County. This landform was created from the accumulation of wind-blown silt. Today these steep hills rise up from the surrounding landscape.

### *Transportation network*

U.S. Highway 75 and State Highway 3 intersect near the center of Plymouth County. The transportation network also includes State Highways 3, 12, and 140.

The County’s secondary road system is composed of 1,423.27 miles. Within this category, Farm-to-Market roads make up 364.06 miles, while Area Service roads account for 1,059.21 miles. Gravel or earth surface types account for 1,056.23 miles of the secondary road system. The remaining 370.76 miles are composed of bituminous, asphalt, or PCC surface types.

*County Governance & Supports*

The county seat is located in Le Mars, just north of the center of the County. Its jurisdiction covers all unincorporated portions within county boundaries. Plymouth County is governed by a five (5)-person Board of Supervisors. The Board is the legislative body of the county.

Additional Offices include the following departments:

- Assessor
- Attorney
- Auditor
- Clerk of Courts
- E-911
- Economic Development
- Emergency management
- Engineer / Secondary Roads
- Information Technology
- Juvenile courts Services
- Planning and Zoning
- Plymouth County Conservation Board
- Recorder
- Sanitarian
- Sheriff
- Social Services
- Solid Waste Agency
- Treasurer
- Veteran Affairs

The Plymouth County Emergency Management Director serves as a key leader in planning, coordinator of operations, and chief of staff to the jurisdiction’s executives during emergency response, community liaison to build the emergency program, and supporter of mitigation efforts. The Plymouth County Sheriff’s Office provides law enforcement services to the rural portions of the County and supports community departments.

*County Facilities*

County Courthouse	215 4 <sup>th</sup> St, Le Mars
Law Enforcement Center	451 14 <sup>th</sup> Ave NE, Le Mars
Engineer's Office	32802 170 <sup>th</sup> St, Le Mars

Roads Department - Equipment/Supply Storage	Several locations throughout County
Historical Museum	335 1 <sup>st</sup> Ave SW, Le Mars
County Fairgrounds	500 4 <sup>th</sup> Ave NE, Le Mars
County Veterans Memorial	1000 3 <sup>rd</sup> Ave SE, Le Mars
Hillview Recreation Area	25601 C60, Hinton
Five Ridge Prairie	15561 260 <sup>th</sup> St, (rural)Westfield
Big Sioux Park	14241 Hwy 12, Akron
Birkley's Bend	26779 Hwy 12, Westfield
Boyd's Bend	13469 Hwy 12, Akron
Doorenbos-Ford Wetland	120 <sup>th</sup> St & Hwy 12, Akron
E.C. Lippke Wetland	11132 240 <sup>th</sup> St, Westfield
Highway 75 Wetland	NE of Merrill, east side Hwy 75
Kohler Memorial Grassland	150 <sup>th</sup> St and Quest Ave, Remsen
Meadow Wildlife Area	45597 140 <sup>th</sup> St, Remsen
Millsite River Access	10001 Hwy 3, Westfield
O'Brien Prairie	26211 Noble Ave, le Mars
River's Bend Wildlife Area	11826 180 <sup>th</sup> St, Akron
Ron Wilmot River Access	180 <sup>th</sup> St & Hwy 12, Akron
Rufus B. Hatch Memorial Grassland	L22 & 140 <sup>th</sup> St, Remsen
Southeast Wildwood	41564 310 <sup>th</sup> St, Kingsley

### *Education*

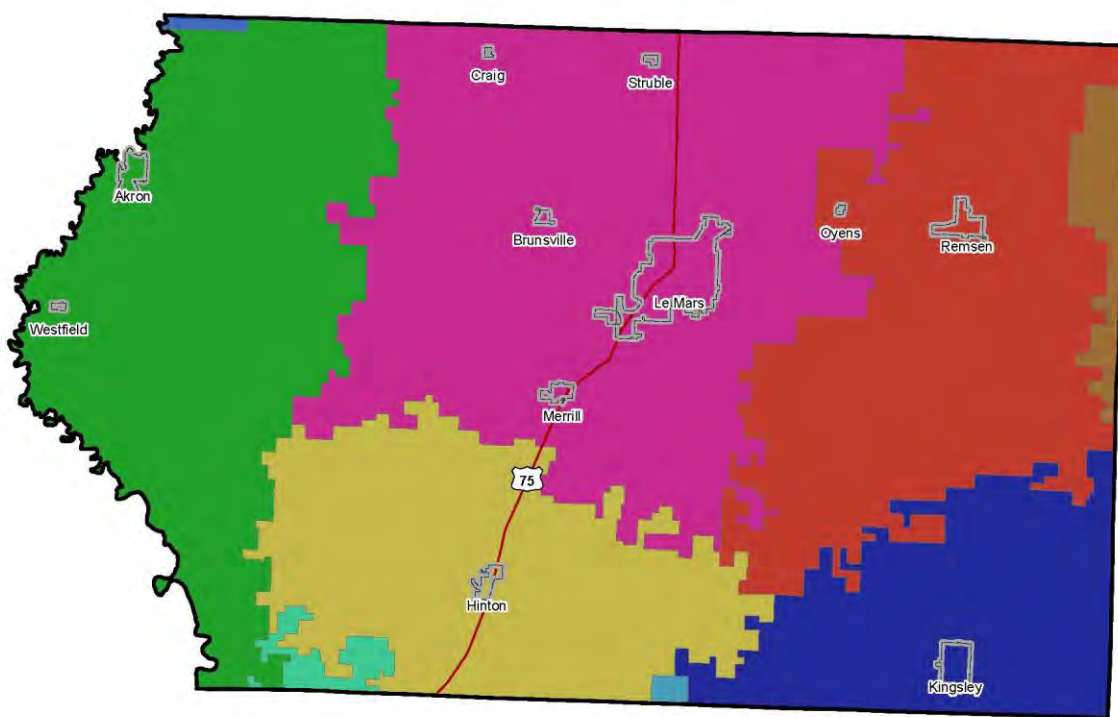
Within Plymouth County, there are 18 public schools. Two (2) of these schools are part of the Marcus Meriden Cleghorn and Remsen Union (MMC and RU) Community School Districts whole grad sharing agreement and are located in part within Cherokee County. There are four (4) private schools located within the County. The remaining 16 schools are divided into four (4) school districts. These districts include the following/

- Le Mars Community School District
- Hinton Community School District
- Akron Westfield Community School District
- Kingsley-Pierson Community School District

While there are no public universities located within Plymouth County, there are two higher education institutions. WITCC, a public two-year college, hosts a Le Mars Center.

Plymouth County generally has a higher percent of residents with a high school degree, some college, or an associate’s degree compared to State averages. However, the County has a lower percent of its population with a graduate or professional degree compared Iowa rates.

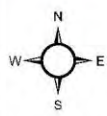
### School Districts, Plymouth County



**Legend**

<span style="color: green;">■</span> AKRON WESTFIELD	<span style="color: pink;">■</span> LE MARS	<span style="color: blue;">■</span> WEST SIOUX
<span style="color: yellow;">■</span> HINTON	<span style="color: brown;">■</span> MARCUS-MERIDEN-CLEGHORN	<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> City Boundaries
<span style="color: blue;">■</span> KINGSLEY-PIERSON	<span style="color: red;">■</span> REMSEN-UNION	
<span style="color: lightblue;">■</span> LAWTON-BRONSON	<span style="color: lightgreen;">■</span> SIOUX CITY	

0 1 2 4 6 8 Miles



<b>Level of Education</b>	<b>Plymouth</b>	<b>Iowa</b>
No high school diploma	7.42%	8.16%
High school degree (includes equivalency)	34.27%	31.52%
Some college, no degree	25.07%	21.31%
Associate’s degree	12.51%	11.34%

Bachelor's degree	16.13%	18.71%
Graduate or professional degree	4.60%	8.97%

### *Population*

Based on 2010 census data, the population of Plymouth County was 24,986. American Community Survey (ACS) data estimates show the 2017 population at 25,027, indicative of possible population growth. Focusing on the unincorporated areas of Plymouth County, the population in 2010 was 8,361, and 2017 population decline slightly to 8,328. This could reveal migration of residents from rural areas into cities – a trend seen nationwide. However, the change is too minimal to make a conclusive inference.

Looking to the future, growth seems likely. In 2 out of 3 growth scenarios, the population of Plymouth County increases. However, the minimum growth rate population projection does predict decline.

According to 2013-2017 ACS 5-year estimates, the median household income is \$61,316, which is higher than the median household income for the state of Iowa at \$56,570. Additionally, Plymouth County has a lower percent of its population living below the poverty level compared to Iowa, at 9.1% and 12% respectively.

Generally, the categories that FEMA identifies as vulnerable populations are present in the County at similar rates compared to the State.

<b><i>Community Characteristics</i></b>	
Population (2010)	24,986
Unincorporated Population (2010)	8,361
Population (2017)	25,027
Unincorporated Population (2017)	8,328
Total Households	10,083
Median Household Income	\$61,316
Median Household Income – Iowa	\$56,570

<b>Population Projections</b>			
	MIN (Growth Rate = -0.6%)	MEAN (Growth Rate = 0.1%)	MAX (Growth Rate = 0.6%)
2010	24,986	24,986	24,986
2020	23,618	25,206	26,547
2030	22,324	25,427	28,205
2040	21,102	25,650	29,967

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Region</b>
5 years and younger	1,559	6.2%	6.78%
65 years and older	4,137	16.5%	16.01%
Below the poverty level	2,277	9.1%	12.88%
Living with a disability	2,929	11.8%	12.41%

### *Housing*

Total housing units in Plymouth County is 10,734. Of those, 10,083 are occupied resulting in a 6.1% vacancy rate. Within the category of occupied housing units, 7,972 are owner-occupied, while 2,111 are renter-occupied. Median home value is \$150,200, which is \$13,000 more than the state median home value. In contrast, median rent is less than Iowa at \$424. This is only \$316 less than the State.

<b>Housing Characteristics</b>	<b>Plymouth</b>	<b>Iowa</b>
Median Home Value	\$150,200	\$137,200
Median Rent	\$424	\$740
	<b>Count</b>	<b>Percent</b>
Total Housing Units	10,734	-
Occupied	10,083	93.9%
Owner-occupied	7,972	79.1%
Renter-occupied	2,111	20.9%
Vacant	651	6.1%

*Income & Economics*

The table below communicates the quantity and proportion of employed individuals within each industry. The total employed population of Plymouth County is 13,100. The three leading industries are:

1. Education services and health care and social assistance
2. Manufacturing
3. Retail trade

Employers within the first industry include the various school districts, including the Le Mars Community School District, which is a leading employer in the County. This category also includes healthcare professionals, including employees of Floyd Valley Hospital and several other institutions. The second leading industry is manufacturing. Within this industry, the leading employer is Wells Dairy, Inc., although there are many other manufacturing corporations. Employees within the third industry, retail trade, are generally employed by smaller businesses and organizations.

The city of Le Mars, which is the county seat of Plymouth County, identifies the following leading employers:

- Wells Dairy, Inc.
- Gus Pech Manufacturing Co.
- SmithCo Side-Dump
- BoDeans Baking Company
- NorAm Cold Storage and Distribution
- Le Mars Public Storage
- Bekins, Inc.
- IML Containers of Iowa

<b><i>Industry for the Civilian Employed Population 16 and over</i></b>		
Civilian employed population (16 and older)	13,100	-
Agriculture, forestry, fishing and hunting, and mining	914	7.0%
Construction	752	5.7%
Manufacturing	2,391	18.3%
Wholesale trade	377	2.9%
Retail trade	1,572	12.0%
Transportation and warehousing, and utilities	885	6.8%
Information	181	1.4%
Finance and insurance, and real estate and rental and leasing	580	4.4%

Professional, scientific, and management, and administrative and waste management services	602	4.6%
Education services and health care and social assistance	2,859	21.8%
Arts, entertainment, and recreation, and accommodation and food services	854	6.5%
Other services except public administration	618	4.7%
Public administration	519	4.0%

**Participation**

A planning meeting was held at the Plymouth County Courthouse Annex on May 30, 2019. County personnel in attendance are as provided.

Duane Walhof	EMA Coordinator
Craig Anderson	Board of Supervisors
Nick Beeck	Conservation
Stacey Feldman	Auditor
Alan Lucken	Zoning Administrator
Shawn Olson	GIS
Mike VanOtterloo	Sheriff
Jill Renken	Assessor
Thomas Rohe	Engineer
Shelly Sitzmann	Treasurer

**Capabilities**

The following capabilities are available at the County level and do not include supports available to the region as a whole. Local resources are identified within each jurisdiction.

<b>Plans/Guidance Docs</b>	
<ul style="list-style-type: none"> <li>• Builder’s Plan</li> <li>• Comprehensive Plan</li> <li>• County Recovery Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Land Use Plan</li> <li>• Local/County Emergency Plan</li> </ul>
<b>Policies/Ordinances</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Drainage Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> </ul>



<ul style="list-style-type: none"> <li>• Floodplain Ordinance</li> <li>• Historic Preservation Ordinance</li> <li>• Landscape Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Zoning Ordinance</li> <li>•</li> </ul>
Iowa Wetlands and Riparian Areas Conservation Plan	Plymouth County Conservation
<b>Programs</b>	
Zoning/Land Use Restrictions	
Codes Building Site/Design	
National Flood Insurance Program (NFIP) Participant	CID #190899
Property Acquisition	
Planning/Zoning Boards	
Mutual Aid Agreements	IMAC & EMAC
<b>Staff/Department</b>	
Building Code Official	Planning and Zoning, and Environmental Health
Building Inspector	
Mapping Specialist (GIS)	
Engineer	
Development Planner	
Emergency Management Coordinator	
NFIP Floodplain Administrator	
Emergency Response Team	Special Response Team
Historic Preservation	
<b>Non-Governmental Organizations</b>	
Veterans Groups	County Veterans Affairs Commission
Environmental Groups	County Environmental Health Department.
<b>Local Funding Availabilities &amp; Authorities</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Assess impact fees for new development	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Ability to withhold spending in hazard prone areas	

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No list is maintained at the County level.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:*

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security measures are reviewed regularly. Primary equipment need at county level is power backup and potentially vehicles that may aid in accessing remote locations. The County would benefit from larger capacity snow removal equipment, and possibly placement of additional storm sirens in under-represented areas. The County has a new Emergency Ops Center and a mobile post command unit. Generators have been added to some critical facilities and for response. SONAR has been upgraded as used by the dive team. Training is readily available for response teams and city staff as applicable.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Though the County did acquire 305 acres in recent years, the acquisition was not due to mitigation activity. The City of Le Mars is pursuing a river-straightening project to reduce impacts and encroachments of river on the Municipal Airport. All transportation projects

implemented through the county, whether funded locally or federally, had some impact on improving or redirecting drainage patterns. More are necessary. A list of completed and pending road projects can be obtained through County Secondary Roads Department and in CIP records as applicable.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.2.1:** Capital Improvements Program.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* CIP status has not changed since previous plan. Capital improvement projects are identified cases by case.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Roadway elevation projects have not been implemented in Plymouth County. Some work on Hwy 75 included maintaining proper drainage channels. Efforts are in place to improve gravel road conditions, even in inclement weather. Ditches are already on a scheduled maintenance program.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Plymouth County is an NFIP participant.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* County Conservation assumes responsibility for monitoring tree population. A plan is in place to address aging trees and their removal. Less focus is on planting at present. Park upkeep including active replacement &/or addition of trees as determined necessary. Conservancy serves in lieu of a tree board and education programs are not scheduled, however information is available through the conservancy board and the Forester housed at the USDA Field Office in Le Mars.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* State Codes and International Building Code are accepted as guiding principles for county development. Development is monitored near corporate limits to ensure necessary natural open space. No shortage of such at the county level. Floodplain regulations have not needed changes implemented.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* The Fire Marshall issues burn bans as needed due to atmospheric conditions. No other ban in place for unincorporated areas except as burning may pertain to a nuisance.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* The County EMA distributed preparedness brochures a few years ago, resulting from a project led by the Region IV LEPC. Alert Iowa is a focus of communications efforts.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow route maintenance is already established, including an assessment of dangerous conditions, downed trees, and utilities.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Two restroom structures at County Parks may serve as refuge locations, but are not rated for tornado safety. Additional refuge shelters are needed at parks and the Fairgrounds.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communications systems are well established through the Conservation Board and Sheriff's office. The county and many of its communities actively promote Alert Iowa notification service, the County's primary means of in-time information provision. Weather radios were purchased in response to this action item and distributed to all communities and school facilities. Tornado warning systems are established with community needs identified in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Significant radio improvements have been made at all radio tower sites. System upgrades have been implemented for responder communications specific to transitioning to multiple response team communications. Addresses ability to dispatch multiple agencies when needed. Television and Telephone systems are not regulated at county level. WIN system automated messages allow some interactivity with landline connections.

## Risk Assessment

### Priority Hazards

Public comment specific to Plymouth County and including the jurisdictions of Hinton, Kingsley, and Akron, indicated Severe Winter Storm and Tornado/Windstorm as highest level of concern. Also significant from public input is Dam/Levee Failure, Extreme Heat, and Terrorism. Issues have varied by community. In addition to Tornado/Windstorm concerns, the county identified top hazards by frequency of related projects.

- Flood – *Flash and Riverine*
- Thunderstorm w/Hail & Lightning
- Severe Winter Storm

### Record of Events

Record of events as reported in NOAAs Storm Event Database show 155 events occurring in the past five (5) years. Some events are reported multiple times on a given date, but each accounts for a specific concern. Winter weather, Flood, Hail, and thunderstorms figure prominently in reported events. Hail and Flood accounted for the greatest portions of the total recorded damages to property at nearly \$2M. Crop damages were reported at more than \$1.6M. The following table shows recorded events for the most recent 12-month period available.

NOAA Storm Event Database – Plymouth County November 1, 2018 – October 31, 2019

PLYMOUTH (ZONE)	12/1/18	Winter Storm	AKRON	6/1/19	Flood
PLYMOUTH (ZONE)	1/1/19	Cold/Wind Chill	JAMES	6/1/19	Flood
PLYMOUTH (ZONE)	2/3/19	Winter Weather	MILLNERVILLE	6/1/19	Flood
ADAVILLE	3/13/19	Flood	WESTFIELD	6/1/19	Flood
AKRON	3/13/19	Flood	REMSEN	6/15/19	Hail
JAMES	3/13/19	Flood	AKRON	6/27/19	Flood
STRUBLE	3/13/19	Flood	PLYMOUTH (ZONE)	6/28/19	Heat
STRUBLE	3/13/19	Flood	WESTFIELD	6/28/19	Flood
WEST LE MARS	3/13/19	Flood	PLYMOUTH (ZONE)	6/29/19	Excessive Heat
HINTON	3/14/19	Flood	PLYMOUTH (ZONE)	6/30/19	Heat
WESTFIELD	3/14/19	Flood	AKRON	7/1/19	Flood
MILLNERVILLE	3/15/19	Flood	WESTFIELD	7/1/19	Flood

AKRON	4/1/19	Flood
WESTFIELD	4/1/19	Flood
MILLNERVILLE	4/11/19	Flood
REMSEN	4/22/19	Hail
AKRON	5/1/19	Flood
WESTFIELD	5/1/19	Flood
MILLNERVILLE	5/28/19	Flood
STRUBLE	5/28/19	Flood

REMSEN	7/12/19	Hail
AKRON	9/12/19	Flood
WESTFIELD	9/13/19	Flood
MILLNERVILLE	9/16/19	Flood
HINTON	9/18/19	Hail
AKRON	10/1/19	Flood
WESTFIELD	10/1/19	Flood

## Jurisdictions

### 1. Akron

#### a. Profile

The City of Akron lies on the western-most border of Plymouth County, on the Iowa/South Dakota border. Akron occupies 1.22 square miles. Big Sioux River Road, Highway 12, and Highway 3 travel north and south through the central part of Akron. A main railroad passes through Akron and consistently follows Highway 12 north and south of the city. Big Sioux River runs on the north part of Akron City's boundary, which is the boundary between Iowa and South Dakota.

#### *City Governance & Community Supports*

Akron is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include:

- Akron Fire & Rescue
- City Administrator
- City Attorney
- City Clerk
- Deputy Clerk
- Library
- Parks & Recreation
- Police Department
- Zoning Board & Commission

The Akron Fire & Rescue is composed of 45 volunteers that respond to calls for service utilizing 12 different apparatus and provide a wide variety of skills and special abilities (<https://akronia.org/>). The city contracts with the County for Emergency Management.

The City of Akron is a member of the NFIP program, though residents are known to be inactive under flood insurance. A comprehensive plan was adopted October 2011.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Akron is recorded at 1,486 with 2018 ACS 5-year data estimates showing a population in at 1,542. The 2013-2017 ACS 5-year estimates indicate median household income to be \$45,476 with 8.2% of the population falling below poverty level.

With new construction, about 62% of Akron’s housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 746 units with 100 vacant and 62 new construction homes built since 2000. Despite ACS estimates, local record indicates a shortage of both housing available for purchase and units available for rent. The City of Akron is effectively experiencing a current lack of available housing. Some, as may be considered by data sources vacant, have not been listed for sale/rent. According to 2010 census data, 7.1% of total population is under the age of 5. About 24.4% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

#### 2019 Valuation of City Assets

Building	\$	7,268,783
Personal Property	\$	886,784
Property in the Open	\$	<u>1,341,202</u>
<b>Combined Total</b>	<b>\$</b>	<b><u>9,496,769</u></b>

#### *Leading Employers*

The following businesses, as well as those listed under Community Supports, operate and have established a necessary presence in Akron. Those as provided are leading employers in the city.



- Akron-Westfield Community School District
- Akron Care Center
- Heyl Truck Lines
- Mike's Inc.

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall	220 Reed St
City Garage	N Hwy 12 @ 2 <sup>nd</sup> St
Library	350 Reed St
Senior Center	204 S 4 <sup>th</sup> St
Police Department	220 Reed Street
Fire Station	1000 Ridge Rd
Fire Siren	5 <sup>th</sup> St @ Dakota St
City Storage	140 2 <sup>nd</sup> St
Office Bldg	300 Reed St
(former) Nursing Home	121 South St
Huff Bldg	245 N 3 <sup>rd</sup> St
Pump House	260 N 3 <sup>rd</sup> St
Lefty Swift Ballfield & Park	2-58 N 4 <sup>th</sup> St
Main Lift Station	Reed St @ River Rd
Lift Station - Heyl	N Norka Dr
Lift Station - Waterbury	S River Rd
Substation	Hwy 12 @ Reed St
Water Tower & Equipment	S 9th St @ Main St
Well Bldg & Related	S end Akron Business Park
Children's Memorial Park	301 Iowa St
City Park & Sargent Field; related	
Bob Tucker Field	
Akron City Park	City Park Dr.
Akron Swimming Pool	340 North 5 <sup>th</sup> Street
Warning Siren	2 <sup>nd</sup> St @ Country Club Ln
Thrift Store	251 N 5 <sup>th</sup> St
Akron Golf Club	941 Country Club Dr

Community Supports, Vulnerable Populations, and Gathering Locations

Akron-Westfield Senior High School	850 Kerr Dr
Akron-Westfield Middle School	
Akron-Westfield Elementary School	
Akron Care Center	991 Hwy 3
Akron Family Practice Clinic	321 Mill St
Akron Opera House	151 Reed Street
Akron Area Museum	S 6 <sup>th</sup> Street & Main St
Chub's Country Store	
CVA Grain Bin	
Casey's	
<b>Outside City Limits</b>	
Appley/Von Hagel Wetland	(South Dakota side of River)
Boyd's Bend	13469 Hwy 12
Big Sioux Park	14241 Hwy 12
Hole n' the Wall Lodge	14396 Diamond Ave
Doorenbos-Ford Wetland	near 120 <sup>th</sup> St & Hwy 12
Higman Wetland	(Iowa side of River)
Lazy H Campground	Little Pearl Lake
Ron Wilmont River Access	180 <sup>th</sup> St & Hwy 12

b. *Participation*

A planning meeting was conducted via phone conference on May 6, 2019. City Administrator Dan Rolfes and City Clerk Melea Nielsen were in attendance. A planning packet was provided prior to the meeting. Communications were maintained throughout the development of this plan.

Additional comment was received through public comment. A display board and comments cards as described in Section G. *Public Input* section under Title I - *Introduction* of this plan where placed at the Akron Senior Center where daily Congregate Meals are hosted. Five (5) comments specified Akron for resident Jurisdiction. Except for concerns not applicable to mitigation planning, those comments have been incorporated into the data defining Akron's profile and hazard concerns.

c. *Community Capabilities*

In addition to resources as available through State, Region, and County entities, the City has the following capabilities as locally derived and/or determined.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
Capital Improvement Plan	
Local/County Emergency Plan	
Land Use Plan	
Wellhead protection plan	
Firewise or other fire mitigation plan	Fire Department incident command structure
Critical Facilities Plan (Mitigation/Response/Recovery)	within Emergency Ops Plan
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Zoning Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> <li>• Drainage Ordinance</li> <li>• Historic Preservation Ordinance</li> </ul>
Building Code	UBC & IBC
<b>Programs</b>	
Zoning/Land Use Restrictions	
Codes Building Site/Design	
National Flood Insurance Program (NFIP) Participant	CID #190223
ISO Fire Rating	Akron class 4; Akron FD class 4/8B
Property Acquisition	
Planning/Zoning Boards	
Tree Trimming Program	
<b>Staff/Department</b>	
Zoning Administrator	Building Code Official
	NFIP Floodplain Administrator
Public Works Official	role of Zoning Administrator
Emergency Response Team	Akron Fire & Rescue
Historic Preservation	
<b>Non-Governmental Organizations</b>	

Veterans Groups	Legion Post 186
Homeowner Associations	
Neighborhood Associations	Neighborhood Watch
Chamber of Commerce	
Community Organizations	Lions
	Knights of Columbus
	PEO
	Friendship & Service Club
	Next Generation Club
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, or electric services	
Ability to incur debt through: <ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>	

*Review of Actions Taken*

Projects as implemented in the past five (5) years may have a considerable effect on the City’s ability to mitigate the effects of natural disasters when actions and strategies as proposed in the 2014 Plan were applied to those projects. Following is a status update. All actions as included in the 2014 are considered closed unless specified here and included in the 2019 list of Region Actions, Strategies, and Projects identified in this.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is maintained. The Community Center is open during the week and may serve as a cooling shelter.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A grant funded a smoke detector program two (2) years ago. Still in place – residents may contact city. Local doctor’s office also provided radon detection kits for residents.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Akron has one (1) portable generator available for use between all of its critical facilities. Social media communications includes reference for contacts with emergency equipment. Boats and outside agencies under mutual aid are available for use. No additional equipment needs. Annual training is available for volunteers. Additional training is dependent on number of new recruits.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* For the most part, high risk to flooding property has been designated as a “no build zone” through floodplain regulations. A lift station was lifted to improve function during high water events in 2016. No acquisition plan is under consideration at this time. Several years ago, improvements were made at the industrial park. Street improvements scheduled for 2019 that may improve some conditions, however roadway flooding not an overriding concern in city limits. Several parks and rec areas are intentionally developed in a manner to preserve open natural space. There is also space designated as wetlands.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* City development is determined on a case-by-case basis. Expenses are posted as budget line item.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* No action taken on this item.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Akron has a CIP in place.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Akron is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Akron does not have a formal tree planting plan, but a Tree Board is in place. Maintenance is addressed within the City Code as are some restriction on tree types under nuisances. No education programs are in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard subdivision ordinance in place. Individual development has own covenants. Council may bring forward for review to determine if revision is needed. National Building Standards are followed for local development, though not necessarily by adoption.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open burning is banned in town, not restricted outside city limits by County. County issues red flag warnings as needed based on conditions.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Akron has an established communications network and routinely includes information to promote public awareness of hazards. The city uses its website, Facebook, utility bill mailings, and the local cable channel.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* An informal snow removal route is in place, allowing for adjustment as needed. Removal usually addresses access to school/bus barn to facilitate safe student transport. City ordinances address roadway snow routes including parking restrictions.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Schools have internal refuge locations, but not a “tornado safe room”. Refuge also available at fire station, community center, and local churches. The Akron Care Center is actively updating emergency protocol and has generators in place to maintain necessary equipment for residents (i.e. oxygen supply tanks).

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Community communications are well established. City ambulance and police departments also established presence on Facebook. Two warning sirens are in place. One in

center of town, one to the south near newest housing development. Interest in additional siren near school.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* County has improved radio service in recent years. State tri-band too expensive at community level but would like to see county or region implement significant improvements. Cable and telephone services not at control of jurisdiction, however services are available in standard packages. Amber alert system through cell providers has superseded need for improvement through landline connections.

#### d. *Risk Assessment*

##### *Contributing Factors*

Flooding in and around Akron has been a significant issue for much of the past five years in particular. In the NOAA Storm Event Database, record shows 20 flood events in Akron since August of 2015, and one (1) hail event. Regional weather too has its complications but water-caused damages are the most significant. Public comment as received, specific to Akron, indicated Tornado/Windstorm, Sever Winter Storm, and Dam/Levee Failure. Thunderstorm w/Hail & Lightning was very close to the top three. Priority as determined by city investment and level of concern in regard to planning are as follows.

##### *Priority Hazards*

- Dam/Levee Failure
- Flood – both River and Flash
- Drought



e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Westfield are included in Title III Region listing of Mitigation Actions, Strategies, & Projects in Section G.

## 2. Brunsville

a. *Profile*

The City of Brunsville is situated just north of center in Plymouth County, and occupies .24 square miles. The main road that connects the city to surrounding communities is Highway 3, it runs east and west and lies about 1.2 miles south of Brunsville.

*City Governance & Community Supports*

Brunsville is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include City Clerk and City Administrator. City staff designates the Legion Hall as significant support entities to community well-being. Additional community supports are specified in the discussion of Community Capabilities. The City contracts with the county for law enforcement and with the City of Le Mars's emergency response team.

The City of Brunsville is a member of the NFIP program, though the majority of residents are known to be inactive under flood insurance. The city is covered by the county's Local/County Emergency Plan and has a few plans adopted, and are specified in the discussion of Community Capabilities.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Ida Brunsville is 151. Housing available in 2010 was 66, with 65 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 152, slightly higher than the 2017 estimate of 96. The 2013-2017 ACS 5-year estimates indicate median household income to be \$56,250 with 1.0% of the population falling below poverty level.

With minimal new construction, about 53.8% of Brunsville's housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 54 units with 0 vacant and just 2 new construction homes built since 2000. According to 2010 census data, 9.3% of

total population is under the age of 5. About 15.9% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City's assets may be compiled based on its insured properties, personal property, and facilities. A value was not provided for reporting but will be calculated for cost-benefit analysis should the city pursue any mitigation projects.

#### *Leading Employers*

The following businesses operate and have established a necessary presence in Brunsville.

- Brunsville Quality Meats
- Corner Café
- First State Bank
- Iowa Prairie Bank

#### *Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

##### *City Facilities*

- City Hall, 310 Oak St
- Brunsville Public Park, Oak St and Locust St

##### *Community Supports, Vulnerable Populations, &/or Gathering locations*

- ALCW (Lutheran Aid Society)
- American Legion Post 724 Heeren McHale Wilkens

#### *b. Participation*

Mayor Steve Dickman and City Clerk Bev Hultquist replied via phone calls in May and October 2019 response to the planning packet sent in early spring. ***Please note that the City of Brunsville participated in the development of this Plan. However, as the City has 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.***

c. *Community Capabilities*

Local resources are somewhat limited for Brunsville, however, they do have in place the networks they need. In addition to those as shown below, Brunsville benefits from a wide variety of resources at the county, region, and state level. Those supports are provided respectively within the county and region capability assessments in this plan.

<b><i>Policies/Ordinance</i></b>	
National Flood Insurance Program (NFIP) Participant	CID #190476
Mutual Aid Agreements	Countywide & with SCFR for Haz Mat Response
<b><i>Non-Governmental Organizations</i></b>	
Veterans Groups	American Legion Post 724 Heeren McHale Wilkens
Community Organizations	ALCW (Lutheran Aid Society)
<b><i>Local Funding Availability</i></b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water, and sewer services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>general obligation bonds</li> <li>special tax bonds</li> <li>private activities</li> </ul>

*Review of Actions Taken*

Part of building resilience in a community is to incorporate mitigation actions into existing projects and identifying mitigation-specific opportunities that may improve the community's ability to withstand a natural disaster. The city of Brunsville has reported that no actions have been taken to directly affect mitigation within the past five (5) years. The following actions as listed are considered closed and no new actions, strategies, or projects have been identified for the city.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 1.1.2:** Provide smoke detectors to property owners.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

- Action 2.1.2:** Improve or acquire high-risk to flooding property.
- Action 2.1.3:** Improve drainage patterns in and around the community.
- Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.
- Action 2.1.5:** Roadway Elevation and Access.
- Action 2.2.2:** Participation in National Flood Insurance Program.
- Action 2.2.3:** Tree Planting Plan.
- Action 2.2.4:** Tree Maintenance Plan.
- Action 2.3.1:** Improve and Maintain Subdivision Regulations.
- Action 2.3.2:** Evaluate and Improve Building Standards.
- Action 2.3.3:** Continue/Begin Floodplain Regulations.
- Action 2.3.4:** Preserve Natural Open Spaces.
- Action 2.3.5:** Tree Board.
- Action 2.3.6:** City Ordinance for Trees.
- Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.
- Action 3.1.2:** Education on tree types and planting.
- Action 4.1.1:** Additional equipment for emergency response.
- Action 4.1.2:** Improve the maintenance of roadway snow routes.
- Action 4.1.3:** Snow Plan.
- Action 4.1.4:** Obtain adequate equipment and training for first responders.
- Action 4.2.1:** Identify, design, and develop storm shelters.
- Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.
- Action 4.3.2:** Community warning system.
- Action 4.3.3:** Improve local weather radio service.
- Action 4.3.4:** Cable TV interrupt warning system.
- Action 4.3.5:** Telephone interrupt warning system/reverse 911.
- Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.
- Action 4.3.7:** Tornado warning system.

Status: No action was taken on the above items. Record of program already in place are indicated in the capabilities section of this community profile.

d. *Risk Assessment*

*Contributing Factors*

Brunsville’s greatest challenge is a small tax base and little or no budget available to implement mitigation-specific projects other than on an as-needed basis. The city is bordered on the west with floodplain, and through the top half of the city proper. No reports are on record in NOAA’s storm event database specific to Brunsville. The city was no doubt impacted by the 54 reported incidents designated for the Plymouth County zone – primarily winter-weather related, with a few occasions of extreme heat. One warning siren is in place, and is sounded through the County Communications System.

*Priority Hazards*

Priorities as designated in 2014 remain top concerns.

- Flood – flash
- Tornado/Windstorm
- Severe Winter Weather

e. *Mitigation Actions & Strategies*

Except for those as may be implemented by the County, Brunsville has no planned mitigation actions, strategies, or projects planned for the next five (5) years. Should that change, Brunsville will amend this plan at the local level and submit record of that amendment with any application for funding for mitigation-related projects.

### 3. Craig

a. *Profile*

The City of Craig is situated near the northern-most border of Plymouth County, and occupies 0.09 square miles. The city lies about eight miles north of Highway 3, which runs east and west.

*City Governance & Community Supports*

The City of Craig is governed by a five-person Council and the Mayor. In addition to Mayor and Council, Craig staffs a City Clerk. The City contracts with the county for law enforcement and

Emergency Management. Craig also contracts with Ireton Fire and Rescue, which is located five miles north on CR-K30; Law is enforced by the Plymouth County Sheriff's Office.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Craig is 89. Housing available in 2010 was 45, with 37 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 92, slightly higher than the 2017 estimate of 85. The 2013-2017 ACS 5-year estimates indicate mean household income to be \$70,092 with 4.3% of the population falling below poverty level.

With minimal new construction, about 93.8% of Craig's housing stock was built in 1939 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 32 units with 8 vacant and one new construction homes built since 1999. According to 2010 census data, 3.4% of total population is under the age of 5. About 11.1% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City's assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

For the purpose of cost-benefit considerations, a valuation of the City's assets may be compiled based on its insured properties, personal property, and facilities. A value was not provided for reporting but will be calculated for cost-benefit analysis should the city pursue any mitigation projects.

#### *Leading Employers*

While not hosting a large number of employees, the following businesses operate and have established a necessary presence in Craig.

- Farmers' Cooperative of Craig
- Iowa State Bank

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

- City Hall                      725 Main St
- Poplar Park                    Main St and Pine St

Community Supports, Vulnerable Populations, &/or Gathering Locations

- St John’s Evangelical Lutheran Church      400 Linn St

b. *Participation*

Phone communications were conducted with Mayor Barry Cornish between May and October 2019. A planning packet was sent out prior to the first phone contact. **Please note that the City of Craig has participated in the development of this Plan. However, as the City has 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.**

c. *Community Capabilities*

The City of Craig has a small population with a few localized resources. In addition to those as provided, Craig may benefit from county, region, and state resources as specified in respective sections of this plan.

Craig has a basic City code of Ordinances that is maintained with record of amendments, resolutions, and adoptions. Fire and Rescue services are provided through an agreement with the City of Ireton. Craig also has mutual aid agreements with all communities in Plymouth County and with SCFR (through Plymouth County) for hazardous materials response. Funding capabilities are as shown.

<b>Local Funding Availability</b>
Ability to apply for Community Development Block Grants
Ability to fund projects through Capital Improvements funding
Authority to levy taxes for a specific purpose
Fees for water and sewer services

- |                                |   |
|--------------------------------|---|
| Ability to incur debt through: | <ul style="list-style-type: none"><li>• general obligation bonds</li><li>• special tax bonds</li><li>• private activities</li></ul> |
|--------------------------------|---|

### *Review of Actions Taken*

Part of building resilience in a community is to incorporate mitigation actions into existing projects and identifying mitigation-specific opportunities that may improve the community's ability to withstand a natural disaster. The City of Craig has reported that no actions have been taken to directly affect mitigation within the past five (5) years. The following actions as listed are considered closed and no new actions, strategies, or projects have been identified for the city.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 1.1.2:** Provide smoke detectors to property owners.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.1.5:** Roadway Elevation and Access.

**Action 2.2.2:** Participation in National Flood Insurance Program.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

**Action 2.3.4:** Preserve Natural Open Spaces.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.



**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

Status: No action was taken on the above items. Record of programs already in place are indicated in the capabilities section of this community profile.

#### d. *Risk Assessment*

##### *Contributing Factors*

Craig is without floodplain in corporate boundaries. Flash flooding has caused some problems, though only one recorded report of flood is available in the NOAA Storm Event Database. No other reports are on record. One warning siren is in place, and is sounded through the County Communications System.

##### *Priority Hazards*

- Tornado/Windstorm
- Sever Winter Storm
- Grass or Wildland Fire – Primarily due to lack of locally available resources to combat fire of any kind, this hazards may easily become widespread and travel to other communities.

e. *Mitigation Actions & Strategies*

Except for those as may be implemented by the County, the City of Craig has no planned mitigation actions, strategies, or projects planned for the next five (5) years. Should that change, Brunsville will amend this plan at the local level and submit record of that amendment with any application for funding for mitigation-related projects.

## 4. Hinton

a. *Profile*

The City of Hinton is situated near the southwestern-most border of Plymouth County, and occupies 0.69 square miles. Highway 75 is the main road that connects Hinton to surrounding communities and runs north and south through the city. The Floyd River is less than a mile east of Hinton City. The Burlington Northern/Santa Fe, Illinois Central, and Union Pacific railroads provide rail service or pass through Hinton.

*City Governance & Community Supports*

Hinton is governed by a six-person elected Council and the Mayor. Offices in addition to Mayor and Council include City Clerk, Municipal Utilities, and Public Works. The Fire Department staffs 31 volunteer firefighters with 11 emergency medical service certifications. The Hinton Fire and Ambulance Department serves the city and rural surrounding community. Hinton Public Safety Building was recently built in 2012. City staff designates the Legion as significant support entities to community well-being, additional community supports are specified in the discussion of Community Capabilities.

The City contracts with the county for law enforcement and Emergency Management. The City of Hinton is a member of the NFIP program, though residents are known to be inactive under flood insurance. A Comprehensive Plan was adopted July 18 2019.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Hinton is 928. Housing available in 2010 was 374, with 363 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 941, slightly higher than the 2017 estimate of 776. The 2013-2017 ACS 5-year estimates

indicate median household income to be \$70,074 with 7.7% of the population falling below poverty level.

With minimal new construction, about 33.9% of Hinton’s housing stock was built in 1939 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 333 units with 16 vacant and 118 new construction homes built since 1999. Estimates show a total of three mobile homes, 0.9% of the total housing units available. According to 2010 census data, 7.2% of total population is under the age of 5. About 13.9% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets:

Building	\$	4,378,309
Personal Property	\$	513,158
Property in the Open	\$	<u>2,832,552</u>
<b>Combined Total</b>	<b>\$</b>	<b><u>7,724,019</u></b>

*Leading Employers*

While not hosting a large number of employees, the following businesses operate, and have established a necessary presence, in Hinton. Additional business and organizations supporting the overall wellbeing of Hinton are included under Community supports.

- Central Valley Ag
- Hinton Community School District

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall	205 W Main
Hinton City Park	15 S Center St
Hinton Community Center	205 W Main St

Substation & Equip	26505 C60
Pump Station	Pump Site
Ball Park & Tractor Pull	
Pump House	Sec 8, T90N, R46W
Deer Run Golf Course	801 First Ave
Warning Siren	315 W Grand St
Fire/Ambulance/Police Depts	308 1st Ave S
Water Booster Station	Titan Rd @ Springbrook Dr

Community Supports, Vulnerable Populations, &/or Gathering locations

Hinton High School	315 W Grand
Hinton Middle School	312 W Grover
Hinton Elementary School	315 W Grand
Preschool & Daycare	315 W Grand (independent but onsite @ school)
Hinton Baseball Field	C60 & S Center St
Held Sports Complex	1 <sup>st</sup> Ave S
Hillview Recreation Area	25601 C60
Michael's Miracle Park	Valley Dr
Junkyard Pub & Grub	1116 Starview Dr

b. *Participation*

A planning meeting was conducted on March 25, 2019 via phone conference. City Clerk Gerry Judd participated with additional information provided by Mayor Kelly Kreber and Fire Chief Chad Beck. A planning packet was dropped off prior to the planning meeting. Phone and email communications continued through the development of this plan.

Public comment as described in the Region section of this plans explains the process for requesting and documenting public input as it pertains to Hazard Mitigation. Comment provided through the online public comment survey as available October 28 – November 27, 2019 designating Hinton as its jurisdiction are included in the summaries of needs and capabilities as provided. Additional input opportunity was open during Kingsley Days, where a display board and comments cards were on-site. No responses were collected.

c. *Community Capabilities*

Hinton’s ability to remain resilient through natural and other disasters is primarily due to the commitment of its residents to come together and as a community at all times. Hinton has effective and efficient plans in place including its locally derived disaster plan, which successfully aided in addressing the flood in 2019. Hinton is proud of the volunteer teams serving in Fire & Rescue.

Though no mitigation-specific measures were implemented under Pre-Disaster Mitigation Funds, some projects have improved the community’s ability to withstand hazards. In addition to capabilities as included in the following table, Hinton also has access to resources as available through county, region, and state programs and supports. Those are identified within the region and county profiles respectively as applicable.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
Hinton Disaster Plan	
National Flood Insurance Program (NFIP) Participant	CID #190224
ISO Fire Rating	Class 5/5A (2019)
Planning/Zoning Boards	
<b>Staff/Department</b>	
Emergency Response Team	Hinton Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Post 477 Casper
Community Organizations	Beautification Babes of Hinton
	Civic Club
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	

Fees for water, sewer, and municipal electric services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is maintained.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* This program has not been implemented for the public.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The city purchased a skid loader to assist in general access, maintenance, and cleanup efforts as need. The Police Department and Fire Department update equipment as needed and upgrade as funds become available. Specification of acquired equipment and additional equipment needs have not been identified.

Training for response teams is available regularly to enable annual certifications and specialized trainings as available. County, region, and state resources are used to fund training.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Property acquisition is not applicable as current floodplain is primarily city property already. The city is interested in assessing the possibility for floodgates to be installed at the dyke. Sandbagging was effectively implemented for 2019 flood situations. Issue due to rapid snowmelt on frozen ground during heavy rain. Usually not a considerable issue. A mobile pump would further benefit drainage, especially when influenced by unique situations as occurred in 2019. Hinton's golf course is effectively preserving open natural space within and outside the floodplain. Two dykes are in place, one large, one small. Area near dyke remains undeveloped.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Projects are brought to Council as they occur. Comprehensive Plan development is essential in local project planning. Hinton's Comp Plan cross-references their Capital Improvement Plan.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Usually, roadway access is not a significant concern. March of 2019, again, redefined local needs. Lack of communication from Iowa DOT involving a local road serving as a detour, resulted in delay in road closure on the local level. No action has been taken on this measure but a strategy is necessary to ensure motorists are not being directed to impassible/inaccessible routes when detoured.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Hinton participates in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A formal tree planting plan is not in place. Community organizations make a concerted effort to maintain trees and vegetation in public spaces. Maintenance and some planting regulation are addressed in the city code in regard to public right-of-way. City Council acts on matters in lieu of a Tree Board.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulation is included in the City Code. SUDAS is adopted by reference as established building standards. Floodplain regulations are in place.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Burn controls are not in place except as issued through the Fire Marshall due to contributing conditions.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Hinton is interested in coordinating scrolling marquee messages with County Emergency Management to improve awareness.



**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A formal snow plan is not in place, allowing flexibility to suit a given situation. A Snow Emergency Ordinance is in place restricting on street parking as needed. Part of responsibility in clearing roadways is assessing critical infrastructure, debris, and/or downed trees while en route. Electric conduction runs underground, preventing downed powerlines. Wells are checked daily so irregularities are monitored and addressed. Instant awareness communicated via direct connection to phone line. Communications center receives alerts and action progresses from there.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No certified tornado shelters are in place in Hinton. Schools have designated refuge locations.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Hinton uses the Community Bulletin Board and scrolling marquee regularly. The city is on a new webpage/social media platform and will be increasing usage of those to communicate with residents. Local news is a reliable source of communication as well. The County did distribute weather radios in the past; those are no longer functioning and there is no current interest in replacing them.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Hinton's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Hinton is a growing community with two new residential developments in the works. Concerns linger about human-caused and biological hazards due to a grain elevator explosion in 2018. Traffic incidents are frequent along Hwy 75 and on rural roads, into and out of town. A brother and sister were killed in a car accident in January 2020 due to icy-covered gravel roads, a loss for the whole community. On record in the NOAA Storm Event database are eight reports on six dates – tornado, hail, and flood. Damage costs are shown at \$1,000 for the tornado incident and a combined amount of \$200,000 from hail occurring on April 15, 2017.

Floodplain runs through the full northeast section of town and crosses through just below the center of town and the golf course. Even so, flooding seems to be an issue only recently – resulting in a road closure in March 2019. That closure was complicated by its designation as an alternate route due to other DOT issued road closures. Beginning estimates from damages as incurred in March are at \$246,000. Tornado is a considerable concern, as are windstorms, which are frequent in the area. Hinton has one warning siren in place near the high school. It is sounded through the County Communications Center, but warnings can be initiated by the city.

Public comment specified an interest in improved communications, specifically by way of early warning system and an inter-operable communications network. The City and all levels of response teams should receive the same information at the same time – including but not limited to City, Fire Department, Police Department, Iowa DOT, and County Emergency Management. Early warnings need to be integrated with established local and regional communication forums (i.e. Internet sites and cable TV) including evacuation plans as applicable. Identified as the highest concerns for respondents: Tornado/Windstorm, Infrastructure Failure, and Transportation Incident.

### *Priority Hazards*

- Flood
- Severe Winter Weather
- Thunderstorm w/Hail & Lightning

### e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Westfield are included in Title III Region listing of Mitigation Actions, Strategies, & Projects in Section G.

## 5. Kingsley

### a. *Profile*

The City of Kingsley is situated near the southeastern-most border of Plymouth County, and occupies 1.61 square miles. The West Fork Little Sioux River runs northeast and southwest just a mile or less west of the city.

### *City Governance & Community Supports*

Kingsley is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include City Clerk, Water Clerk, Maintenance, Police, Fire Department, Ambulance and Rescue, Maintenance, City Attorney, and the Chamber. The Fire Department staffs about 25 volunteer firefighters. City staff designates the Legion Hall as a significant support entity to community well-being. Additional community supports are specified in the discussion of Community Capabilities (<http://kingsleyia.com/publicservices.html>).

The City of Kingsley is a member of the NFIP program, though the majority of residents are known to be inactive under flood insurance.

### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Kingsley is 1,411. Housing available in 2010 was 610, with 563 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 1,401, slightly lower than the 2017 estimate of 1,464. The 2013-2017 ACS 5-year

estimates indicate median household income to be \$72,778 with 8.5% of the population falling below poverty level.

With limited new construction, about 55.5% of Kingsley’s housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 612 units with 72 vacant and 133 new construction homes built since 1999. Local records show the addition of about 15 new single-family homes since 2014. According to 2010 census data, 7.4% of total population is under the age of Five (5). About 24.2% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

*2019 Valuation of City Assets*

Total Valuation of Buildings & Property in the Open: **\$ 5,346,502**

*Leading Employers*

Kingsley has welcomed 3-4 new businesses into existing facilities in the past few years. The community has a mix of small and large employers. The following are among the largest employers in Kingsley.

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

*City Facilities*

City Hall	222 Main St
Kingsley Public Library	220 Main St
Kingsley Community Center	217 E 1 <sup>st</sup> St
Ambulance & Rescue	
Kingsley Volunteer Fire Dept	319 E 1 <sup>st</sup> St
Police Department	
City Maintenance Building	
Cemetery Building	222 Main St.

Water Tower	
Lagoon Building & Controls	
Water Pump House	
Lift Station	
No. 3 Well	
Little League Field	
Loring Aquatic and Fitness Center	Quest Ave
Kingsley City Park	Park Dr & Brandon St
Tennis Court/Basketball Court	

Community Support, Vulnerable Populations, &/or Gathering Locations

US Post Office	210 Main St
Kingsley-Pierson High School	322 Quest Ave
Kingsley Elementary School	322 Quest Ave
Kingsley Medical Clinic	111 Main St
Kingsley Nursing & Rehab Center	305 W 3 <sup>rd</sup> St,
Brookside Golf Course	101 Iowa 140
Southeast Wildwood	310 <sup>th</sup> St & Quorn Rd

b. *Participation*

A planning meeting was held via conference call on May 21, 2019. City Clerk Vicki Sitzman was in attendance. Additional information was provided by Mayor Rick Bohle and Maintenance Superintendent, Steve Jantz. Further contribution was offered through public input using the online survey as distributed to communities in the region. One submission was specified for Kingsley.

c. *Community Capabilities*

In addition to county, region, and state programs and supports, Kingsley has the following local resources in place.

<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>Floodplain Ordinance</li> <li>Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>Open Burn Ordinance</li> <li>Zoning Ordinance</li> </ul>
International Property Code adopted May 2019	

<b>Programs</b>	
Zoning/Land Use Restrictions	
National Flood Insurance Program (NFIP) Participant	CID #190477
ISO Fire Rating	Class 6/8B
Planning/Zoning Boards	
<b>Staff/Department</b>	
Public Works Official	
Building Inspector	
Emergency Response Team	Fire Dept, Ambulance & Rescue, Police Dept
Regional Planning Agencies	SIMPCO and Iowa League of Cities
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Nash Post 140
Chamber of Commerce	
Community Organizations	Kingsley Community Action Club (KCAC)
	School Clubs
	Booster Club
	4-H
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water & sewer services	Water and Sewer
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list of cooling stations is available. The Community Center is locally known to be available. In the event of an emergency, remote access is possible. Facebook may be used to communicate availability as needed.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* The City has not implemented a smoke detector program. The fire department may be interested if funds are made available.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Generators were put in place at the lift station, water plant, and lagoon. Fire Department and Ambulance make an effort to keep equipment up to date and upgrade as able to do so. The City would like to additional equipment for response situations should funding become available. Training is readily available. However, volunteers are limited by time constraints.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* High-risk property already in restricted development area. Floodplain needs to be updated to reflect terracing project that has improved properties. Drainage issues have not been cumbersome. Permeable pavers were installed in a problem alley, slowing the flow of water, and improving drainage in the area.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

Status: A formal CIP is not in place.

**Action 2.1.5:** Roadway Elevation and Access.

Status: Elevation of roadways has not been considered as washout is more of an issue than full road coverage. Resulting access issues accelerated by runoff over frozen ground and gravel erosion are current issues that may need to be addressed.

**Action 2.2.2:** Participation in National Flood Insurance Program.

Status: Kingsley is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion as each strategy listed in the previous plan is inter-related.*

Status: No formal Tree Planting Plan is in place. Maintenance is addressed in the City Code. Recently updated, it defines roles of responsibility for trees in the public right-of-way. City Council acts in lieu of a Tree Board. A retired forester acts as a formal advisor, contributing to the city's trail plan. No formal education program is in place pertaining to tree types or tree planting.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*



*Status:* Subdivision Ordinances are not in place, but may be considered. Each development has a set of covenant in place, guiding property owners' decisions. A building inspector joined city staff in 2019. Council has adopted the International Property Code, Chapters 1-3 as a guiding set of standards. Floodplain regulations are in place.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* A public awareness program is not in place, but established communication networks may be used as needed.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A route has been developed and is implemented downtown by contracted snow removal. The City addresses outlying areas. Utilities are assessed during snow removal. Parking is prohibited on streets October through April to enable adequate access.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The Community Center is designated as a storm shelter, but is not rated for tornado safety. No plan is in place to add storm shelters.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city has an active presence on Facebook, the local paper, and on their website. Communications during and after emergencies follow this established network. The city has two (2) warning sirens – one at the water tower and one at the lift station near the golf course.

Sirens are sounded through the County Communications Center. The Fire Department volunteers are trained as storm spotters. Weather radios are not in place, nor is there interest in adding them. Text alerts and other in-time notifications are readily available.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Kingsley's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Kingsley has floodplain running through town, just south of center. The Golf Course and undeveloped greenspace fills most of the designated area, though a few industries may be affected. The city has two warning sirens, audible throughout city limits. Kingsley has five (5) reported weather events in the NOAA Storm Event Database, all occurring in 2016. Within the past few years, Thunderstorm, Tornado, and Hail were notable locally while winter weather was significant in Plymouth County and the region.

##### *Priority Hazards*

Public input as included in Plymouth County responses to the online version included one designated for Kingsley. Top concerns identified there include Severe Winter Storm, Sinkhole, and Thunderstorm w/Hail & Lightning. Each is reasonable cause for concern – winter storms are expensive in terms of maintenance for cities, hail damage is the most frequently reported event in NOAA for Kingsley, and aging waterworks as affected by extreme weather is lending cause to concern for sinkholes. The City has determined the following to be the greatest cause of concern.

- Tornado

- Flooding
- Grass and Wildland Fire

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Westfield are included in Title III Region listing of Mitigation Actions, Strategies, & Projects in Section G.

6. Le Mars

a. *Profile*

The City of Le Mars is situated near the center of Plymouth County. U.S. Highway 75 stretches vertically along the city, Iowa Highway 3 stretches horizontally through the city, and Iowa Highway 60 is accessible north of the city. Amongst Plymouth County, the City of Le Mars accounts for the largest population and spatial area occupying approximately 8.6785 square miles. Little Floyd River runs through the north-west and south-west corner of the city’s boundary.

*City Governance & Community Supports*

Le Mars is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include are as provided.

- |   |                                  |
|---|----------------------------------|
| • Airport                                 | • Library Trustees               |
| • Ambulance                               | • Mapping                        |
| • Board of Civil Service Commission       | • Park Committee                 |
| • Board of Zoning Adjustment Commission   | • Parks and Recreation           |
| • Broadband Telecommunications Commission | • Planning and Zoning Commission |
| • City Clerk                              | • Police Department              |
| • Code and Building                       | • Public Works/Parks/Cemetery    |
| • Convention and Visitors Bureau          | • Tree Board                     |
| • Disaster Services Coordinator           | • Urban Renewal Advisory Board   |
| • Finance Dept                            | • Waste and Recycling            |
| • Fire Department                         | • Wastewater Treatment           |
| • Historic Preservation Commission        | • Water Department               |
| • Hospital Trustee Board                  |                                  |

The Le Mars Fire-Rescue department has up to 32 volunteers and is funded by a combination of township fire fees, City taxes, and fund drive donations. The department provides coverage and protection to 8 miles of City Limits and approximately 200 square miles of rural territory including all or partial areas of seven townships and four other small communities or villages.

The city of Le Mars is a member of the NFIP, though residents are known to be inactive under flood insurance. A Comprehensive Plan was adopted in 2017.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Le Mars is 9,826. Housing available in 2010 was 4,220, with 4,013 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 9,996, significantly higher than the 2017 estimate of 9,861. The 2013-2017 ACS 5-year estimates indicate median household income to be \$58,063 with 10.2% of the population falling below poverty level.

With new construction, about 51.4% of Le Mars's housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 4,408 units with 239 vacant and 539 new construction homes built since 2000. Estimates show a total of 269 mobile homes, 6.1% of the total housing units available. According to 2010 census data, 7.0% of total population is under the age of five (5). About 16.8% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City's assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

#### *2019 Valuation of City Assets*

Building	\$	111,060,353
Personal Property	\$	3,820,280
EDP - Hardware	\$	351,640
EDP - Software	\$	11,901
Misc Property Sched	\$	2,899,869
Misc Property Unsched	\$	<u>779,621</u>

**Total \$ 118,923,664**

*Leading Employers*

The following businesses are among the largest in the jurisdiction.

- BoDeans Baking Co.
- Dean Foods
- Floyd Valley Hospital
- Iowa National Guard
- Le Mars Community Schools
- Schuster Trucking Co.
- Wells Enterprises Inc.

Several expansions and investments were completed in recent years. Wells Enterprises added break room to their facilities, Floyd Valley Healthcare completed a \$27M expansion with the addition of an onsite healthcare clinic and surgical center. Le Mars Community Schools and BoDeans Baking Company each invested in renovations and updating of their facilities.

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City & County Facilities

<b>City Facilities</b>	
City Hall	40 Central Ave. SW
Police Department	205 5th Ave NW
Fire Rescue Department	45 1st Ave. SW, Station No. 1
Fire Station #2	12th St SE
Garage (FD)	45 1st Ave SW
Ambulance	25 12th St SE
Airport & Related	1327 Hawkeye Ave SW
Public Works Bldg	800 18th St SW
Storage Facilities for various Depts	<i>multiple addresses</i>
Water Department	1298 18th St. SW
Water Towers	1002 3rd Ave SE
Well Houses	<i>multiple addresses</i>
Water Treatment	700 5th Ave NW
Wastewater Treatment & Related	175050 Key Ave
Lift Stations/Pumps	<i>multiple addresses</i>
Booster Station	33082 200th St

Misc Waterworks, Bldgs & Property	100 Park Lane Rd
Deans Electrical Ctrl Bldg	1078 Lincoln St SW
Shed	301 9th Ave
Office Bldg	50 Central Ave
6 Warning Sirens	<i>Various locations</i>
<b><i>Outdoor Recreation</i></b>	
Adler Park	Plymouth St SE
Bolser Park	2nd St & 5th Ave SE
Cleveland Park	2nd St & 6th Ave S.E.
Courts; Park; Golf Course; Related	935 Park Lane
Foster Park	Central Ave & 6th St S.E.
Municipal Park	813 Park Ln
O'Brien Prairie	26211 Noble Ave
O'Toole Park	Central Ave & 4th St N.E
Outdoor Swimming Pool & Park	241 12th St SE
Paulin Park	12th St & 7th Ave S.E
Riverview Complex	N of Hwy 3
Schafer Park	15th St & Schafer Ave SE
Walnut Park	11th St & Central Ave SE
West Floyd Park	3rd St & 12th Ave SW
Westmar Memorial Park	10th St SE
Willow Creek Campground	Hwy 3 & Park Lane
Le Mars Area Family YMCA	241 12th St SE
<b><i>Cultural and Wellness</i></b>	
Visitor Info Center	54 Central Ave SE
Veterans Memorial Park & related	3rd Ave SE @ 10th St SE
Olson Cultural Events Center	33 1st St NE
Post 21 Playhouse	105 1st St NE
Wellness Center	201 12th St SE
Le Mars Sportsman Club	31549 C38
Civic Art Center	200 Central Ave SE
Royal Theatre	33 Central Ave SW
Le Mars Convention Center	275 12th Street SE
Le Mars Public Library	46 1st St SW
<b><i>County facilities</i></b>	

Plymouth County Historical Museum	335 1st Ave SW
Plymouth County Fairgrounds	500 4th Ave. NE
Plymouth County Veterans Memorial	1000 3rd Ave SE
<b>NOTE:</b> Several County facilities and Services as listed in the Plymouth County Profile	

Community Supports, Vulnerable Populations, &/or Gathering locations

Le Mars High School	921 3rd Ave SW
Individualized Learning Center	940 Lincoln Street SW
Le Mars Middle School	977 3rd Ave SW
Clark Elementary School	201 2nd Ave NW
Franklin Elementary School	400 3rd Ave SE
Kluckhohn Elementary School	1338 Central Ave SE
Floyd Valley Community Health Service	714 Lincoln St NE
Floyd Valley Hospital	714 Lincoln St NE
Good Samaritan Society - Le Mars	1140 Lincoln St NE
Park Place Estates	900 Lincoln St NE
Plymouth Manor Care Center	954 7th Ave SE
Pride Group Inc.	214 Plymouth Street SE
PRIDE 1 - Residential Care Facility	214 Plymouth Street SE
Prime Living Apartments	108 1st Ave NW
The Abbey of Le Mars - Nursing Facility	320 1st Ave SE
The Abbey of Le Mars - Residential Care Fac.	320 1st Ave SE
Blue Bunny Museum and Meeting Center	115 Central Ave NW
Mobile Home Courts ( <i>Vulnerable Populations</i> )	930 4 <sup>th</sup> St SW
	76 6 <sup>th</sup> Ave NW
	500 block 6 <sup>th</sup> Ave SW
	401 4th St NW

b. *Participation*

Initial communications were conducted with Jason Vacura, City Administrator. A planning meeting was held on-site at Fire Station 1 on June 6, 2019. Fire Chief David Schipper and Deputy Chief Michael Wise. A planning packet was sent to the city prior to the meeting. Additional information was provided by Scott Kneip – Public Works, Greg Smidt – Code Enforcement/Zoning Administrator, and Neil Adler – Chamber of Commerce. Email

communications with J. Vacura and D. Schipper continued through the development of this plan.

Public input opportunity was available online from October 28 through November 27, 2019. No respondents replied specifying Le Mars as jurisdiction represented. No invitations for on-site displays to collect public comment were accepted.

*c. Community Capabilities*

In addition to resources as available through county, region, and state channels, Le Mars has the following supports in place at the local level.

<b>Plans/Guidance Documents</b>	
2017 Comprehensive Plan	
2015 Builder’s Plan	
Capital Improvement Plan	
Le Mars Emergency Operation Disaster Preparedness Plan	
Land Use Plan	
Firewise or other fire mitigation plan	Le Mars Fire Department
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Debris Management Plan</li> <li>• Drainage Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Historic Preservation Ordinance</li> <li>• Landscape Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Codes Building Site/Design	Code Enforcement
Hazard Awareness Program	Disaster Preparedness Plan
	Plymouth Co Alerts (through Alert Iowa) – text/email
ISO Fire Rating	Class 3/3Y
Mutual Aid Agreements	Countywide 28E
	SCFR through County for HazMat Response
National Flood Insurance Program (NFIP) Participant	CID #190225
Planning/Zoning Boards	



Property Acquisition	guided via Iowa ROW Manual
Tree Trimming Program	
Zoning/Land Use Restrictions	
<b>Staff/Department</b>	
Building Code Official	Code Enforcement Officer
Building Inspector	
NFIP Floodplain Administrator	
Development Planner	Code Enforcement Officer/Le Mars Business Initiative Corp.
Public Works Official	
Coordinator of Disaster Services	City Administrator
Emergency Response Team	Fire and Rescue
Historic Preservation	Historic Preservation Commission
Mapping Manager	
<b>Non-Governmental Organizations</b>	
Community Organizations	
<ul style="list-style-type: none"> <li>• Le Mars Business Initiative Corp</li> <li>• Lions</li> <li>• Kiwanis</li> </ul>	<ul style="list-style-type: none"> <li>• Optimists</li> <li>• Rotary</li> <li>• Sertoma</li> </ul>
Homeowner Associations in select neighborhoods	
Le Mars Area Chamber of Commerce	
Neighborhood Associations in select subdivisions	
Veterans Groups	American Legion Wasmer Post 241
<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Fees for water & sewer, stormwater, and solid waste services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>general obligation bonds</li> <li>special tax bonds</li> <li>private activities</li> </ul>
Withhold spending in hazard prone areas	Yes

### *Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A cooling station list is not maintained, however, refuge locations are identified within the city's disaster plan. The Fairgrounds facilities are available as cooling sites during events. Several public buildings open during regular business hours are available in addition to the pool, and park shelters throughout the city.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No update was provided for this item.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The city conducts ongoing reviews of security procedures and equipment. Procedures are outlined in the city's disaster plan with a full update completed every two (2) years and changes are documented as they occur.

Security improvements were made at the Fairgrounds. Generators are available for Water, Streets, and Ambulance Departments. Two (2) warning sirens were added in Le Mars, bringing the total to six (6) under city jurisdiction. Sirens are sounded through the County Communications Center but can be initiated in the city. A battery backup was installed in one

siren in April 2019, completing the project. All now operable on direct current, with battery backup.

The city and its departments experience an on-going need for equipment updates and/or replacements. Departments have an annual budget for routine replacements and may incorporate new equipment into the CIP. The city maintains a contract with Kneip for additional equipment as needed in the event of an emergency. Barricades are pre-arranged to be made available for road closures, and potentially trail closures. Response teams and the city continually assess grant opportunities to improve their respective response and resiliency capacities. Through a collaboration with the county, flood pumps have been added to the city inventory.

Training for response teams is readily available through local, county, region, and state programs. Consistent with smaller communities, time available for volunteers is very limited. Levels of certification required lend toward necessitating a full paid staff. Equipment needed and being considered for purchase is included in the Region listing of 219 Mitigation Actions, Strategies, and Projects.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Property acquisition is implemented primarily under right-of-way uses. Most high-risk properties are already owned by the city. Improvements to flood-prone areas and drainage projects are ongoing. A berm is in place as flood control for the new police department building. Retention ponds are part of new developments and have been added to slow runoff in some locations. Many improvements are outcomes of non-mitigation projects such as roadway repairs. The city has a vast network of parks and recreation areas with the intention of preserving natural open spaces. The Airport Flooding Protection project addresses drainage patterns and desired control mechanisms and is included in the Region listing of 2019 Mitigations Actions, Strategies, and Projects in this plan.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* Projects as implemented are guided through the CIP and Comprehensive Plan. Additional projects are incorporated on an as needed basis when immediate attention is required.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Roadway access issues require continual maintenance, especially for gravel roads. Specific elevation projects have not been identified but may have been completed in conjunction with county and/or state road construction/repairs/replacements. An elevation project is included in the Region listing of 2019 Mitigations Actions, Strategies, and Projects included in this plan.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Le Mars is a participant in the NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A Tree Planting Plan has been implemented. Tree maintenance is guided through city ordinances establishing responsibility especially in the public right-of-way. A Tree Board is in place, as is a Tree Ordinance and Tree Trimming Program. A specified education program is not in place but planting and tree type guidance is provided by the Tree Board and the Parks & Recreation Department.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard Subdivision Regulations are in place under the City Code. Some division incorporate their set of covenants in addition to city standards. Building code was updated in 2015 and references building standards. Floodplain Regulations are in place and monitored based on elevation improvements. A draft version is on file through the Iowa Flood Center and can be viewed online at <http://ifis.iowafloodcenter.org/ifis/maps/hazard/>.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Education programs are available through the fire and police departments. On-site trainings are provided upon request. Training for the public include fire extinguisher safety, active shooter, severe weather, and industry-specific hazards.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:*

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Emergency storm shelters are in place at the Plymouth County Fairgrounds in Century Hall and under the Grandstands.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communication to residents is conducted through established networks as available in the city. The city may send alerts to imminent conditions (including but not limited to parking restrictions due to snow) through the Alert Iowa platform as promoted by the city and county. The city's website is active and highlights the availability of City Alerts. As referenced several times, the city has six (6) warning sirens. They are used to alert of tornado and high wind events. Weather radios are not uniformly in place, staffed critical facilities, schools, hospitals, and response teams are connected through the city alert system. Information on action needed follows the established chain of command as included in the city's disaster plan.

d. *Risk Assessment*

*Contributing Factors*

Le Mars has several large-scale employers, whose employees reside in several different communities. Creating a more-or-less transient population, preparing for emergencies cannot be an exact process. Response teams must coordinate with each other, including their industry partners, to correctly determine the number of people in an area at any given time. Fortunately, the city has an active Disaster Plan and Response team in place. Each role is clearly identified so no communications are lost. Despite ongoing efforts to improve flood-prone areas, the intersecting waterways in and around the city remain a primary consideration in all planning efforts.

Events recorded in the NOAA Storm Event Database show six (96) events specific to Le Mars in the most recent 5-year period available. Thunderstorm w/Hail figures prominently, with one flood event. In recent history, flooding is of the greatest concern. Hazardous Materials Incident, Transportation Incident, Dam/Levee Failure, and most other hazards as identified by the state are on the radar. Severe Winter Weather and Extreme Heat factor considerably in local agriculture and manufacturing industries. Earthquakes are not a significant concern. Priorities are determined by likelihood of occurrence and cost of resulting damages.

*Priority Hazards*

- Flood
- Thunderstorm w/Hail & Lightning

- Tornado/Windstorm

- e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Westfield are included in Title III Region listing of Mitigation Actions, Strategies, & Projects in Section G.

## 7. Merrill

- a. *Profile*

The City of Merrill is situated near the center of Plymouth County, just south of Le Mars City. Highway 75 is the main road that travels vertical through the east and south part of Ida Merrill. Floyd River runs next to the east border of the Merrill. There is also a railroad that travels vertically through the center of the city.

### *City Governance & Community Supports*

Merrill is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include City Clerk, Police Department, Ambulance Department, Maintenance Department, Library, and EDC Department. The Merrill Fire Department is staffed by 22 volunteer firefighters. City staff designates the Legion Hall as a significant support entity to community's well-being. Additional community supports are specified in the discussion of Community Capabilities.

Merrill contracts with the county for law enforcement and Emergency Management. The City of Merrill is a member of the NFIP program, though residents are known to be inactive under flood insurance.

### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Merrill is 755. Housing available in 2010 was 317, with 304 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 736, significantly lower than the 2017 estimate of 826. The 2013-2017 ACS 5-year estimates indicate median household income to be \$55,972 with 12.1% of the population falling below poverty level.

With new construction, about 63.6% of Merrill’s housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 349 units with 4 vacant and 18 new construction homes built since 2000. Estimates show a total of three mobile homes, 0.9% of the total housing units available. According to 2010 census data, 7.5% of total population is under the age of 5. About 15.9% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets:

Building	\$	5,203,047
Personal Property	\$	268,912
EDP-Hardware	\$	5,000
Misc Property Sched	\$	461,311
Misc Property Sched	\$	<u>10,000</u>
<b>Total</b>	<b>\$</b>	<b><u>5,948,270</u></b>

*Leading Employers*

The following businesses operate, and have established a necessary presence, in Merrill.

- Branum Oil
- Casey's
- Iowa Prairie Bank
- Plymouth Energy LLC
- Plymouth Feeds Company

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities (including Parks and City Gathering Locations)

City Hall	608 Main St,
Senior Center	
Library-Kissinger Ctr	
Police Department	
Fire Station	500 Roosevelt



Ambulance Department	507 Douglas St
Merrill Community Center	321 4th St
Garage Mntc Shop	301 2nd St
Sewer Lift Station	(East end) Main St
Disaster Siren	
Disaster Siren	(East end) Court St
Merrill Community Park & Related	725 Webster
Park & Related	700 Webster
Misc Storage	301 2nd St
Water Treatment; Pump House & related	600 Center St

Community Support Offices and/or Gathering locations

- Emma Rae's
- Hometown Mobility
- Lampe Auto

b. *Participation*

A planning meeting was held on-site at Merrill City Hall on April 30, 2019 with City Clerk Margaret Marienau in attendance. A planning packet was delivered prior to the meeting. Email and phone communications were maintained throughout the development of this plane. A display and comment cards were on site at the Merrill Senior Center, and then City Hall, encouraging public comment. No comments were submitted indicating Merrill as a respondent's jurisdiction.

c. *Community Capabilities*

Merrill has the following resources in place in addition to those as available through county, region, and state supports.

<b><i>Plans/Guidance Documents</i></b>	
Comprehensive Plan	
Land Use Plan	
<b><i>Policies/Ordinance</i></b>	
Zoning Ordinance	within City Code
Floodplain Ordinance	within City Code

Drainage Ordinance	In covenants for HOAs
<b>Programs</b>	
National Flood Insurance Program (NFIP) Participant	CID #190478
ISO Fire Rating	Class 6/9
<b>Staff/Department</b>	
Public Works Official	
Emergency Response Team	Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Oleson-Halweg
Chamber of Commerce	
Community Organizations	Lions Club
<b>Local Funding Abilities</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water and sewer services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Capabilities are enhanced by implementation of projects that include mitigation actions. Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No formal designation is in place. The library and community center may be used as cooling stations when open. For refuge in extreme weather conditions, residents have opened their homes to others as needed. City Hall may be designated as a refuge location for

emergency conditions. An established communication network is in place to inform residents as needed.

Extreme weather refuge is available at the campground restrooms. They are not tornado-rated structures, but they do offer some protection in most conditions.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program was funded through the FD and implemented a few years ago. Periodically reinstated as funds become available.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Merrill as added a generator to serve as backup for some of its critical facilities. Equipment needs, updates, and replacements are ongoing for the city's response teams. Action is taken as funds are available but operation budget for each department is limited. Trainings are provided through county, region, state, and related associations allowing responders to maintain certification.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Improvements have not been completed but improving the dike at the northeast end of town is a current project. Drainage problems are recurring @ Calhoun St, between 3<sup>rd</sup> & 2<sup>nd</sup> Streets. As plugged drain is the cause, the City is working on establishing a maintenance schedule to be more proactive in overflow prevention. A terracing project was completed

within the past several years – the city partnered with the landowner to successfully implement some flow-slowing measures.

Several Parks in town as established in part, as means of maintaining natural open space. Rural in composition, greenspace is not lacking.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* The portion of flooded roadway most affecting Merrill, US Hwy 75, is under state jurisdiction. C44 has some issues as well and is under the county’s maintenance.

**Action 2.2.1:** Capital Improvements Program.

*Status:* the city has a Comprehensive Plan that includes project-based prioritization. A set aside is not designated, however, projects are funded through the annual budget process

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Merrill is a participant in the NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The Public Works and Police departments assume responsibility of tree planting and maintenance oversight that falls under the city’s responsibility. Work in the public right-of-way is completed or brought to the landowner’s attention in accordance with direction as provided in the City Code. A tree Board is not in place. Decisions as not directly resolved through the city’s Tree Ordinance are determined by the Mayor and Council. The library has informational programs and has included education of tree types as part of those offerings.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision standards are not in place within City Ordinances, nor is there a definitive reference to a standard set of building codes. The city does have a floodplain ordinance that may be revised upon completion of the DNR update in progress as of 2019.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* City Code includes an Open Burn ban and Fire Pit Ordinance.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* The city has an active communication network through its newsletter and use of its identified posting locations (post office and city hall). Though not frequently used for awareness and education, seasonal preparedness has been included.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city has a formal snow route maintenance plan. During removal, condition of utilities and trees area assessed for damages. Need for debris removal is addressed as well.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communication during and after emergencies will proceed through established channels as much as possible. The city will also use its website and coordinate with its response teams and County Emergency Management to ensure accurate information is disseminated. There are three warning sirens in Merrill, audible throughout the city limits and beyond. Weather radios are in place but not often used, relying instead on text alert systems.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within Merrill's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Storm Event reports as applicable to Merrill in the NOAA Database were those common with the county as a whole. Region-attributed winter weather patterns and strong winds are of note in regard to disruption of routine activities. Floodplain lies on the east side of Merrill, primarily affecting ag lands and Hwy 75 in both directions north and south from town. Transportation Incidents are of concern due to motor vehicle traffic, over-the-road hauler presence, and the train that crosses the highway on the south edge of town. The police department maintains a visible presence to reduce potential issues. Hazardous materials are of concern as well.

##### *Priority Hazards*

- Flooding
- Tornado/Windstorm
- Severe Winter Storm

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Westfield are included in Title III Region listing of Mitigation Actions, Strategies, & Projects in Section G.

8. **Oyens**

a. *Profile*

The City of Oyens is situated near the northeastern part of Plymouth County and occupies 0.09 square miles. Highway 3 is accessible from less than a mile, just south of the city. Highway 3 is the closest main road to connect the city with surrounding communities. There is a railroad that travels horizontally and passes through the southern part of the city.

*City Governance & Community Supports*

Oyens is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include City Clerk, Maintenance, and economic development. The Merrill Volunteer Fire Department is independent of the city and staffs about 22 volunteer firefighters. Oyens contracts with the county for law enforcement and Emergency Management.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Oyens is 103. Housing available based on local accounting is 44 (per Mayor Randy Kellen), with 42 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 101, slightly higher than the 2017 estimate of 95. The 2013-2017 ACS 5-year estimates indicate median household income to be \$64,375 with 0.0% of the population falling below poverty level.

With new construction, about 71.1% of Oyens' housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 38 units with 0 vacant and no new construction homes built since 1999. According to 2010 census data, 5.8% of total population is under the age of 5. About 14.6% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City's assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute

to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	463748
Personal Property	\$	<u>10612</u>
<b>Total</b>	<b>\$</b>	<b><u>474360</u></b>

Leading Employers

Oyens has a few small businesses in town. Central Valley Ag is its leading employer.

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Hall	230 Main St
Fire Station	
Well House	401 Park St
Water Plant Shed	

b. Participation

Communications with Mayor Randy Kellen and City Clerk Peggy Kellen were maintained through email, with specifications for updates and projects communicated on May 3, 5, and 6, 2019. **Please note that the City of Oyens actively participated in the development of this Plan. However, as the City has 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.**

c. Community Capabilities

Following are local resources contributing to city resiliency. Those as listed are complemented by supports available through the county, region, and state, included in the County and Region profiles of this plan.

<b>Policies/Ordinance</b>
Zoning Ordinance



Nuisance Ordinance	
<b>Programs</b>	
Zoning/Land Use Restrictions	
NFIP Community Rating System (CRS) Participant	
ISO Fire Rating	Class 9/10
Staff/Department	Comments
Emergency Response Team	Yes, Fire and Rescue
<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water and sewer services	
Impact fees for new development through TIF	
Ability to incur debt through: <ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>	

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan. Items with actions completed or additional comment are listed first, with the items without action taken are grouped together at the end of the update section.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program is currently in place, and the city expects to maintain that availability to residents.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

*Status:* The city regularly reviews its security procedures and related equipment. Though improvements are made as needed, no projects have been identified relating to mitigation.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Improvements to high-risk properties timeline for implementation has changed to five (5) years, with some options identified and more to be considered. The city has cleared ditches and is monitoring them more actively to prevent future clogging. . No specific projects have been identified but may be submitted as an amendment when Oyens moves project plans before Council. Drainage pattern improvements are an ongoing need with projects determined based on conditions at the time.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Oyens does participate in the NFIP.

**Action 2.3.2:** Evaluate and Improve Building Standards.

*Status:* The city has continues to evaluate building standards, making improvements as necessary. These efforts are expected to continue.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* An open burn ordinance is in place.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Awareness efforts regarding natural hazards are in place through promotion of subscription to alert systems. Education items as pertinent to seasonal or other pending hazards may be included in the Announcements agenda items and included in the minutes for posting.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow removal for the town is routine. A truck was added to city inventory to improve effectiveness.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communication between the city and residents is well established, with warning issues through text alerts. The city has a warning siren in place. It is sounded through County Communications, and is audible when out of doors throughout the city. Door-to-door communications are implemented if necessary. Critical facilities do not have weather radios. City Hall and the Fire Department are equipped with Communications Center radios, which serve to keep communication lines open. The city and county are active participants in the Alert Iowa notification system.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.1.5:** Roadway Elevation and Access.

**Action 2.2.1:** Capital Improvements Program.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

**Action 2.3.4:** Preserve Natural Open Spaces.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

**Action 4.1.3:** Snow Plan.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*Status:* No action was taken to directly affect the items grouped above. Some measures as in place may be referenced in other sections. In stating this, the action items for Oyens are now closed.

To note for reference, local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Oyens is not affected by floodplain. Flash Flood may cause some concerns, but those are addressed primarily through ditch maintenance. No reports in the NOAA Database are specific to Oyens in the past five (5) years.

*Priority Hazards*

Geographic location and limited resources to battle fire are the impetus for determining the following as priority hazards.

- Tornado/Windstorm
- Thunderstorm w/Hail & Lightning
- Grass and Wildland Fire

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Westfield are included in Title III Region listing of Mitigation Actions, Strategies, & Projects in Section G.

## 9. Remsen

### a. Profile

The City of Remsen is situated in the northeast quadrant of Plymouth County, occupying 1.27 square miles. Highway 3 is the main road that connects Remsen to surrounding communities and runs horizontal through the south border of the city. A railroad travels through the center east-west bound.

#### *City Governance & Community Supports*

Remsen is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include City Clerk, Street Department, Sanitation Department, Utility Board, and Wastewater Department. Remsen City has a volunteer Fire Department in place. The Department staffs twenty members, headed by one Fire Chief and three officer/personnel positions. Outside of preventing and extinguishing fires, the Fire Department also takes on the responsibility of answering all emergency calls for which there is no other established agency (<http://www.remseniowa.org/>).

City staff designates the Legion as a significant support entity to community's well-being. Additional community supports are specified in the discussion of Community Capabilities. Remsen contracts with the county for law enforcement and Emergency Management, but has a Fire and Response team. A Comprehensive Plan was adopted November 8, 2017.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Remsen is 1,663. Housing available in 2010 was 704, with 645 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 1,621, significantly higher than the 2017 estimate of 1,725. The 2013-2017 ACS 5-year estimates indicate median household income to be \$54,137 with 8.9% of the population falling below poverty level.

With new construction, about 64.4% of Remsen's housing stock on record was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 728 units with 29 vacant and 62 new construction homes built since 2000. As of April 2019, a 30-lot development for single-family dwellings is in the works. City records show an average of 28 building permits are issued each year. Estimates show a total of 16 mobile homes, 2.2% of the total housing

units available. According to 2010 census data, 7.3% of total population is under the age of five (5). About 20.5% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	11,227,181
Personal Property	\$	1,250,223
Property in the Open - ACV	\$	10,200
Property in the Open - RC	\$	<u>5,747,716</u>
<b>Total</b>	<b>\$</b>	<b><u>18,235,320</u></b>

Leading Employers

The following businesses are identified as leading employers in Remsen.

MMC & RU Community School Districts	Marcus & Remsen offices
Happy Siesta Nursing Home	423 Roosevelt Ave,
Mid-Sioux Opportunity	418 S Marion St
Farmers’ Cooperative	6 S Washington
Bavarian Meadows	632 L14 # 130,

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

City Hall	008 W 2 <sup>nd</sup> St
Police Dept	205 Fulton
Fire Dept & Municipal Garage	108-112 1 <sup>st</sup> St
Remsen Public Library	209 Fulton St, Remsen, IA 51050
Maintenance Bldg	215 Fulton St
Well/Reservoir	124 E Nothem Ave
Well Field	North of Remsen
Water Tower	801 Madison St

Remsen Swimming Pool & Related	209 Lincoln St,
Thelen Park; Football Field; North Park	
Garage	122 Marion
Baseball Field (New) & Related	
Sunrise Park & Shelter House	515 E 3 <sup>rd</sup> St
Beck Park & Shelter House	105 Madison St
Old Light Plant	125 E 1 <sup>st</sup> St
Ambulance Bldg	109 Fulton
Shop/Utility Bldg	320 S Marion St
Storage	16267 L12
Main Lift Station & Lab	Marion St
Remsen Cemetery	
Bldg	8 W 2 <sup>nd</sup> St
Niggeling Ball Park & Related	Nothem Ave
Water Treatment Facilities & Related	400 Lagoon Rd

Community Supports, Vulnerable Populations &/or Gathering Locations

MMC & RU Middle School	511 Roosevelt Ave, Remsen
RU Remsen Elementary (Pk-4)	
Avalon Ballroom	114 Fulton St
Remsen Golf Course	506 W 5 <sup>th</sup> St
<i>Outside city limits</i>	
Meadow Wildlife Area	45597 140 <sup>th</sup> Street
Rufus B. Hatch Memorial Grassland	Intersection of L22 and 140 <sup>th</sup> Street
Kohler Memorial Grassland	near 150 <sup>th</sup> St and Quest Ave

b. *Participation*

A planning meeting was held via conference call with City Clerk Rachel Keffeler. Additional information was provided after consultation with the Mayor and Council. A planning packet was delivered prior to the planning meeting. Email communications were maintained through the development of this plan.

In addition to the regional invitation to submit a survey online, a public input opportunity was available through the Congregate Meal Site at Beck Park. A display board and comment cards

were left on-site after a brief presentation about Hazard Mitigation and plan development. One response card indicated Remsen as the respondent’s referenced jurisdiction.

*c. Community Capabilities*

In addition to county, region, and state programs and supports, Remsen has the following local resources in place.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
Builder’s Plan - through Zoning Administrator	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Regulations Ordinance</li> <li>• Dangerous Buildings Ordinance</li> <li>• Drainage Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Historic Preservation Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Open Burning Restrictions (w/Solid Waste Control Ord)</li> <li>• Storm Water Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Ordinance</li> <li>• Well Protection</li> <li>• Zoning Regulations Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
National Flood Insurance Program (NFIP) Participant	CID #190480
ISO Fire Rating	Class 5/8B
<b>Staff/Department</b>	
Building Code Official	Zoning Administrator
Public Works Official	
Emergency Response Team	Yes, Fire and Rescue
Historic Preservation	
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Pieper
Chamber of Commerce	
Community Organizations	Lions Club
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	



Fees for water, sewer, gas, and electric services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal designations have been made. Direction as needed may be available through City Hall/Council members.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* no action taken on this item.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Generators have been added for the water treatment plant and related facilities. The Ambulance Dept has at least one mobile generator for use during response. The city is interested in installing an additional warning siren. Equipment needs for responses teams have not been identified. Training is available through county, region, state, and national association programs.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A property acquisition program is in place as a means of guiding development, but not for flood prone properties. None has been needed. Limited floodplain within city limits may decrease when draft flood hazard product maps through the Iowa Flood Center and DNR have been completed. Drainage issues have not been a problem. The city has moved to proactive measures, clearing ditches routinely. One problem area was addressed within the past five years by way of bridge replacement using a box culvert – a \$600,000 project. The bridge was not structurally sound and impeding water flow. Preservation of natural open space is actively considered when planning changes/development.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Projects are prioritized within the Comprehensive Plan. A formal set aside designated as Capital Improvement Funds is not in place. Projects are chosen case-by-case.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* no action taken on this item.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Remsen is a participant in the NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Tree-related issues are addressed in the Tree Ordinance, but a planting plan is not in place. Maintenance expectations are included for trees in the public right-of-way. Council acts in lieu of a Tree Board as needed. No education program has been formalized, nor is one planned.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision Regulations are in review concurrent to pending development. Building Standards are included in the City Code and periodically reviewed. No changes have been made. Floodplain regulations are in place, though there is minimal area in the floodplain to develop.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* An open burn ban is included in the Solid Waste Control Ordinance. The City has a secure burn site operated by city staff.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* no action taken on this item.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A snow route maintenance routine is in place. There is no local need for a more developed Snow Plan.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The city gym (former location of city hall) is identified as a refuge location. The school have internal refuge locations, but there is not a certified tornado shelter in town. Information about where one may seek refuge is available by word-of-mouth and internal postings (schools). It is not known if a designated refuge location is on-site for trailer park residents.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Text notifications (by subscription), city webpage, Facebook, and regional radio stations are primary modes of communication between residents and the city. There are two tornado sirens in place, used for tornado and high wind events only. A weather radio is in place at City Hall but primary info comes through a text alert system.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Remsen has some floodplain off Deep Creek along the edge of its northern border. In the past five years, Hail is the most commonly reported weather event as recorded in NOAA's Storm Event database. Other significant concerns are consistent with those reflected region-wide.

*Priority Hazards*

- Thunderstorm w/Hail & Lightning
- Tornado/Windstorm
- Flood (mainly flash flood and resulting washout)

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Remsen are included in Title III Region listing of Identified Mitigation Actions, Strategies, & Projects in Section G. **Amended Action item was added August 10, 2020 to address flooding along 5<sup>th</sup> Street.**

**10. Struble**

a. *Profile*

The City of Struble lies near the northern-most border of Plymouth County, and occupies .016 square miles. Highway 75 is the closest man road that connects Struble to surrounding communities. Less than a mile east of the city, Highway 75 travels north and south. West Branch Floyd River also runs north/south, less than half a mile east of the city.

*City Governance & Community Supports*

The City of Struble is governed by an elected Council and Mayor, and appointed City Clerk. Struble contracts with the county for law enforcement. The city does not have a Fire-Rescue department, but contracts with the City of Maurice (Sioux County) Fire and Rescue.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Struble is 78. Housing available in 2010 was 35, with 33 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 78, significantly lower than the 2017 estimate of 111. Local record shows that new families may not be included in those numbers. The 2013-2017 ACS 5-year estimates indicate median household income to be \$51,250 with 27.0% of the population falling below poverty level.

With minimal new construction, about 85.0% of Struble’s housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 40 units with 5 vacant and just three (3) new construction homes built since 2000. Estimates show five (5) mobile homes, 12.5% of the total housing units available. According to 2010 census data, 7.7% of total population is under the age of 5. About 11.5% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	106,237
Personal Property	\$	23,570
Property	\$	<u>27,023</u>
<b>Total</b>	<b>\$</b>	<b><u>156,830</u></b>

*Leading Employers*

While hosting relatively small employee populations, Struble recognizes the following as its leading employers.

- Urban’s Lawn Care
- Royal Kennel

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall	210 William St
City Maintenance Shop	305 Main St
Town Hall	Block 7 Elgin Twp
Shelter House	Lot 11-13 Block 12

*b. Participation*

A planning meeting was conducted in Struble on April 17, 2019. City Clerk Marilynn Vollmecke was in attendance. A planning packet was dropped off prior to the meeting. Email and phone communications were maintained through the development of this plan.

*c. Community Capabilities*

A small community, Struble has limited local resources. However, there is a mutual aid agreement in place with all communities in Plymouth County response, with the Sheriff's department for law enforcement services, and with SCFR HazMat Response through the county as applicable. A border community, Struble also collaborates with nearby communities in Sioux County. Fire and rescue services are contracted with Maurice. Struble may also benefit from all supports as provided through county and regional programs as listed in their respective profiles. The following funding resources are available options for the City of Struble.

<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Ability to incur debt through:	<ul style="list-style-type: none"><li>• general obligation bonds</li><li>• special tax bonds</li><li>• private activities</li></ul>

*Review of Actions Taken*

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* The City Park has shaded areas for relief from direct heat.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program is not in place. Fire concerns are specific to railroad tracks and lack of maintenance to keep rail free of dried grass and weeds.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Several projects were completed to improve the function of critical facilities in Struble. City Hall basement was reinforced and a generator was put into place enabling use of the facility as a refuge location for various inclement conditions – heat, shelter from storm, tornado, and windstorm. Equipment in place includes tractor, snow blower, truck with plow, and generator. An ATV would facilitate access during flood and snow emergencies, especially as means of transferring persons to shelter. No responders live in town so related equipment and trainings are not tracked by the city. There is interest in local storm watcher/spotter training for resident awareness. The city purchased a second warning siren, completely under operation by the city.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Property acquisition is not in consideration. There is not a lot of area in Struble prone to flooding, though the unique characteristics of weather in March 2019 did affect some issues. Since meeting the Struble planning meeting in April 2019, two culverts have been replaced and



a problem alleyway has been tiled allowing water to flow directly to C-12 culverts. Gutters on both sides of Main Street have been cleaned to allow water to flow freely. All streets and alleys have been graveled and maintained to specifications. Preservation of natural open space is incorporated into proposed culvert projects.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* A formal CIP is not in place. Issues are brought to Council on a case-by-case basis.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Due to the path of the train tracks, elevation projects are not possible in impacted areas. Access on gravel roads is maintained by County.

**Action 2.2.1:** Capital Improvements Program.

*Status:* No action taken; none planned.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Struble is not a current participant in NFIP. The City is interested in reassessing that status.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A tree planting plan is not necessary for the small area within Struble city limits. Maintenance is the responsibility of the property owner. City may assist with hauling debris to city burn pile but no obligation for such is in place. Council addresses issues regarding

trees in lieu of a tree board. A tree-specific ordinance is not in place. No education program addressing tree types and planting is locally available.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are not necessary. Permits are issued through Council for review, during which building standards are referenced. Regulations are within City Code. No established set of building standards is formally recognized. Only inspection process in place is in regard to septic tank(s) when property is sold. Floodplain regulations are not applicable based on available floodplain maps.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* A secured City Burn Pile is available, with loads in regulated to ensure no improper burning. Burn bans are noted in regional newspapers and televised news.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* As no air conditioned shelter is in place for public refuge, seasonal awareness is helpful. Can be conducted through flyer distribution or community board posting as needed.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* In-town roads are maintained by contract, outside city limits is handled by County. Snow removal is completed in by the city when manageable. More volume results in contracted removal.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Improvements as implemented at City Hall enable its use as a refuge location.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communication between the City and residents is typically word of mouth or posting on the community bulletin board. In-time alerts are available through the promoted Alert Iowa system. Council and Mayor have weather radios in their homes. The County siren is located at City Hall and is sounded through County Communications. Local siren is at city center and can be activated by phone. When sounding local siren, city must inform Communications Center

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A fee is paid to the county annually for weather radio service. Cable and telephone services are not within the city's jurisdiction to determine services. However, local providers may have interrupt services as part of basic packages.

#### d. *Risk Assessment*

##### *Contributing Factors*

Struble suffered extensive damage for a city its size during the flooding events in March 2019. Damages as resulting from those events included culverts needing replacement and tiling needed for another two or three culverts/drainways. Mass pumping of water from basements caused further complications affecting roads with resulting runoff. Work is necessary to

establish a drain path to better control the flow of excess water. An estimated cost to the town is \$47,000. As of the close of 2019, several drainage projects have been completed.

Record of reported weather events in the NOAA Database specific to Struble show eight incidents on seven dates – all Flood. The city is considerably removed from high activity locations so actions applicable in other communities may not be applicable to Struble.

In the months since the Struble planning meeting, the following issues have been addressed.

#### *Priority Hazards*

- Tornado/Windstorm
- Thunderstorm w/Hail & Lightning
- Grass and Wildland Fire. Greatest concern regarding fire is lack of ability to effectively respond. Fire Department in Maurice is 5.5 to 6.5 miles away.

#### *e. Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Westfield are included in Title III Region listing of Mitigation Actions, Strategies, & Projects in Section G.

## **11. Westfield**

### *a. Profile*

The City Westfield, as its name implies, is the western-most border of Plymouth County, and occupies 0.13 square miles. It is located on the northern edge of the "Loess Hills" landform. Highway 12, Loess Hills Scenic Byway, is the main road that connects Westfield to surrounding communities and runs north and south through the City. County Road C38, just south of town, runs east and connects Westfield to Le Mars. The Big Sioux River runs north and south less than a mile west of the city, and a railroad passes through the center (north and south) of the city.

### *City Governance & Community Supports*

Westfield is governed by a five-person elected Council and the Mayor. Offices in addition to Mayor and Council include City Clerk, City Administrator, Public Works, and Maintenance. Fire

and ambulance services are provided through contract with the City of Akron, as is law enforcement. The Akron Fire/Rescue Department provides pre-hospital patient care and ambulance service. A 28E Agreement is in place between all Plymouth County Communities. Plymouth County EMA for Emergency Management. A comprehensive plan was adopted February 18, 2019.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Westfield is 132. Housing available in 2010 was 73, with 54 occupied. American Community Survey (ACS) data estimates show the population in 2018 at 130, slightly higher than the 2017 estimate of 128. The 2013-2017 ACS 5-year estimates indicate median household income to be \$42,813 with 16.4% of the population falling below poverty level.

With minimal new construction, about 68.9% of Westfield’s housing stock was built in 1969 or earlier. ACS 2013-2017 5-year estimates show housing availability to be 61 units with 5 vacant and just five (5) new construction homes built since 1999. Estimates show a total of six (6) mobile homes, 9.8% of the total housing units available. According to 2010 census data, 6.8% of total population is under the age of 5. About 11.4% of total population are 65 years of age or over.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment are not be represented in this value.

2019 Valuation of City Assets:

Estimated Building Valuation	<b>\$ <u>58,486</u></b>
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*Leading Employers*

While not hosting a large number of employees, the following businesses operate and have established a necessary presence in Westfield.

- The Station

- Hummer’s Roadhouse

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Hall	223 Union St.
Westfield Baseball Field & Related	Plymouth St & Lindon St.
Westfield City Park & Related	Union & Elm St.
Welcome Center	
Shed	
Lift Station & Lagoon	(South end) Railroad Dr
Community Center	215 Linden St
<b>Outside City Limits</b>	
Birkley's Bend	26779 Highway 12
E.C. Lippke Wetland	11132 240th Street
Five Ridge Prairie	15561 260th St
Millsite River Access	10001 Highway 3

*b. Participation*

A planning meeting was conducted via phone conference on April 10, 2019 with City Clerk Talia Evenson participating. Information as provided was also received from Dan Rolfes, City Administrator.

*c. Community Capabilities*

The City of Westfield has in a place some local supports that supplement resources as available through county, region, and state programs.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
Land Use Plan	Future Land Use w/in Comp Plan
<b>Policies/Ordinance</b>	
Permitting process governed by Ordinance	
<b>Programs</b>	
National Flood Insurance Program (NFIP) Participant	CID #190482
<b>Staff/Department</b>	

Public Works Official	
<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Fees for water, sewer, and electric services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A list is not maintained. Shelters are in place at parks; City Hall and Community Center are available when open.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* Program in place providing smoke detectors with inspections through Fire Department or County Health Department.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No changes in security procedures or equipment implemented. One generator at lift station, one at community center for emergency use. Additional generators are needed. Response teams are not centered in Westfield. City staff uses own ATV to access lagoon when roads are washed out.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Acquisition plan may still be considered but has not been implemented. Affected land is primarily agricultural and frequently flooded due to dike failure. Some drainage improvements were implemented through a shared-expense terracing project.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Action not taken on these items. Process identified within context of Comprehensive Plan, which is referenced in planning out projects.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Action item is not implementable at local level. Eligible roadways are county and state jurisdiction.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Westfield is an NFIP participant.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.



*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* While a planting plan is not in place, tree maintenance is guided under City Code. Damaged/diseased trees are to be removed and replaced. Responsibility is outlined, particularly for trees in the public right-of-way. No action has been implemented on an education program.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are included in the City Code. Building standards are enforced through the permitting process. A formal standard has not been adopted. Current land use of the area within floodplain is agricultural.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Burn bans as declared due to weather and other contributing conditions are communicated to residents. Some restrictions are included within the City Code.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* No action has been taken on this item,

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow removal is contracted through a local business. Assessment of utilities and downed trees after storm events are reported as noted.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Consideration for reasonable public shelter is included when planning construction projects. It is too cost prohibitive to consider as a standalone project. Informal refuge is the nearest basement in high wind and tornado conditions.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* No action has been taken to intentionally develop a better communication network. Public posting locations are used for notifications of all types. Staff use text alerts for notifications. The warning siren is sounded for high wind and tornado events through the County Communications Center.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

The NOAA Storm Event Database lists 16 events specific to Westfield in the past five (5) years. Nearly all were Flood. Floodplain covers more than a third of the city, posing a problem for the lagoon – especially when events are recurring. Fire is a significant concern due to lack of local capacity to respond. Hail damage and power outages are frequent and often concurrent

with other conditions as listed. Remaining concerns are consistent with those of the rest of the region.

*Priority Hazards*

- Flood
- Thunderstorm w/Hail & Lightning
- Tornado/Windstorm

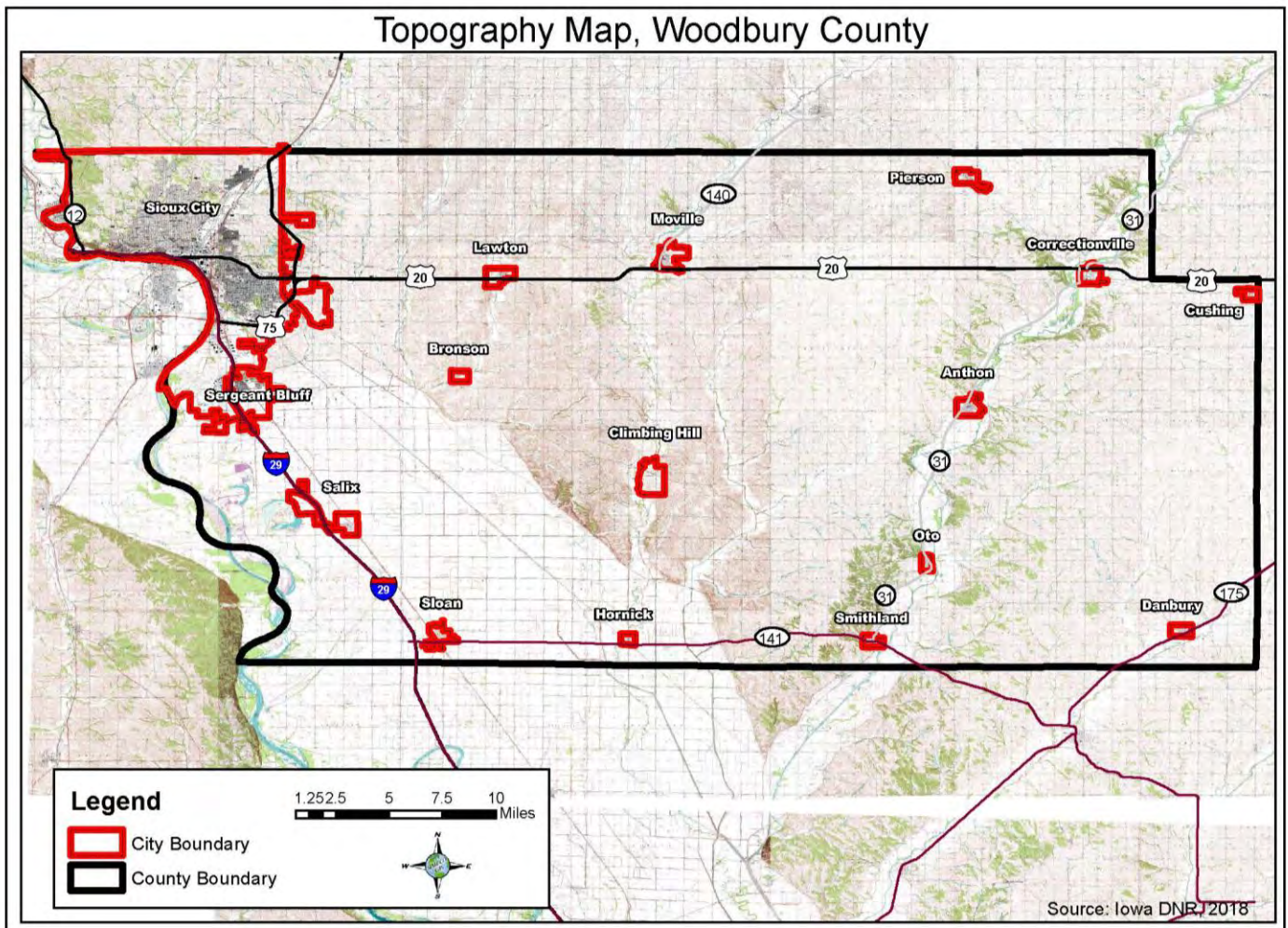
e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Westfield are included in Title III Region listing of Mitigation Actions, Strategies, & Projects in Section G.

## E. Woodbury

### Profile for County & Unincorporated Areas

Woodbury County is located north of center along Iowa's west "coast". The County is bordered by Plymouth County to the north, Ida County to the east, Monona County to the south, and the Missouri River lines its western border with the state of Nebraska. Woodbury is 872 square miles in size.







### *Rivers & Watersheds*

The western border of Woodbury County is the Missouri River. Other significant rivers in the County include the Floyd River, Maple River, Perry Creek, Pierson Creek, and the West Fork of the Little Sioux River.

There are six (6) watersheds within the County that drain storm water and snow melt into streams and lakes, wetland areas, or into groundwater reserves. These watersheds starting west and heading east are Lower Big Sioux Watershed, Blackbird-Soldier Watershed, Floyd Watershed, Monona-Harrison Ditch Watershed, Little Sioux Watershed, and Maple Watershed as shown in the map in the Region portion of this Plan. The following map depicts the sub-watersheds within those as listed above. Sub-watersheds are determined based on hydrologic unit code (HUC) level 12, which includes more detail including tributary data.

### *Landform Regions & Geology*

Woodbury County is composed of four (4) distinct landform regions – Northwest Iowa Plains, Southern Iowa Drift Plains, Loess Hills, and Missouri Alluvial Plain.

### *Transportation Network*

On the western side of the County is Interstate 29, which generally runs north to south. U.S. Highways 20 and 75 and State Highways 12, 31, 140, 14, and 175 are also included in the County's road network.

The County's secondary road system is composed of 1,353.48 miles. Within this category, Farm-to-Market roads make up 395.56 miles, while Area Service roads account for 957.92 miles. Gravel or earth surface types account for 938.85 miles of the secondary road system. The remaining 331.37 miles are composed of bituminous, asphalt, or PCC surface types.

In April 2019, the Woodbury County Board of Supervisors approved the Secondary Road Department Five Year Construction Program. This program plans for \$29,097,000 in bridge replacement and road improvement projects scheduled over the following five years.



*County Governance & Supports*

The county seat is located in Sioux City, in the northwest portion of the County. Its jurisdiction covers all unincorporated portions within county boundaries. Woodbury County is governed by a five (5)-person Board of Supervisors, supported by an administrative staff. The Board exercises power characteristic of each of the three branches of government: executive, legislative, and judicial. Additional county offices include the following departments:

- Assessor
- Attorney
- Auditor
- Communication Center (911)
- Community and Economic Development
- Conservation Board
- Elections
- Emergency Services
- Human Resources
- Motor Vehicle
- Recorder
- Secondary Roads
- Sheriff
- Siouxland District Health
- Social Services
- Treasurer
- Veteran Affairs
- Weed Commissioner

The Woodbury County Department of Emergency Management supports and coordinates between local departments and emergency responses units. The Woodbury County Sheriff's Office (WCSO) provides law enforcement services to the county. The office has 120 employees and covers 872 miles.

*County Facilities*

County-owned facilities and properties are used in a number of capacities by various municipalities in addition to established recreation locales and equipment storage facilities housing County operations materials. Below is a summary of facilities as available through the County's 2018 Statement of Insurance.

<b>Facility Name/Type</b>	<b>Address</b>	<b>City</b>
Anthon Shed; Storage*	NW Corner of Bridge St & Miller Ave	Anthon
Climbing Hill Shed	75 Deer Run Trail	Climbing Hill

Public Safety; Emerg Services Bldgs*	121 Deer Run Trail	Climbing Hill
Correctionville Shed; Storage (PNBR)*	112 Knotty Pine	Correctionville
Multiple structures*	Little Sioux Park	Correctionville
Danbury Shed	NE Corner of 1st St & Thomas St	Danbury
Danbury Tower	3077 Osceola Ave	Danbury
Library - Leased Space	221 Main St	Danbury
Hornick Shed; Storage Shed (PNBR)*	220 Main	Hornick
Library/City Hall - Rented Space *	510 Main St	Hornick
Lawton Shed	Hwy 20	Lawton
Miller Township Shed	SW Corner of 250th & O'Brien Ave	Millersburg
Library - Leased Space	825 Main St	Moville
Moville Shed; Storage*	Hwy 20	Moville
Secondary Roads Office	759 E Frontage Rd	Moville
Multiple structures*	NE Corner of Hwy 31 & 290th St	Oto
Oto Radio Building	Corner of 2nd & Royal Sts	Oto
Oto Shed	205 Washington St	Oto
Library - Leased Space	321 4th St	Pierson
Pierson Shed	106 Summit St	Pierson
Cabins	2924 Snyder Bend Rd	Salix
Luton Shed	2508 Dallas Ave	Salix
Multiple structures*	Snyder Bend	Salix
Multiple structures*	Bigelow Park	Salix
County Building	401 - 8th St	Sioux City
County Building	1211 Tri-View Ave	Sioux City
Courthouse	620 Douglas St	Sioux City
Dorothy Pecaut Nature Ctr.	4500 Sioux River Rd	Sioux City
Law Enforcement Center	407 7th St	Sioux City
Law Enforcement Training Center	1600 County Home Rd	Sioux City
Prairie Hills facility & related*	1600 County Home Rd	Sioux City
Siouxland District Health	1014 Nebraska St	Sioux City
Trosper-Hoyt County Serv Bldg	822 Douglas St	Sioux City
Comfort Station Storage; Open Shelter*	Fowler Forest	Smithland
Multiple structures*	Southwood, 1 Mi SW of Smithland	Smithland
* denotes multiple buildings &/or structures at site location		

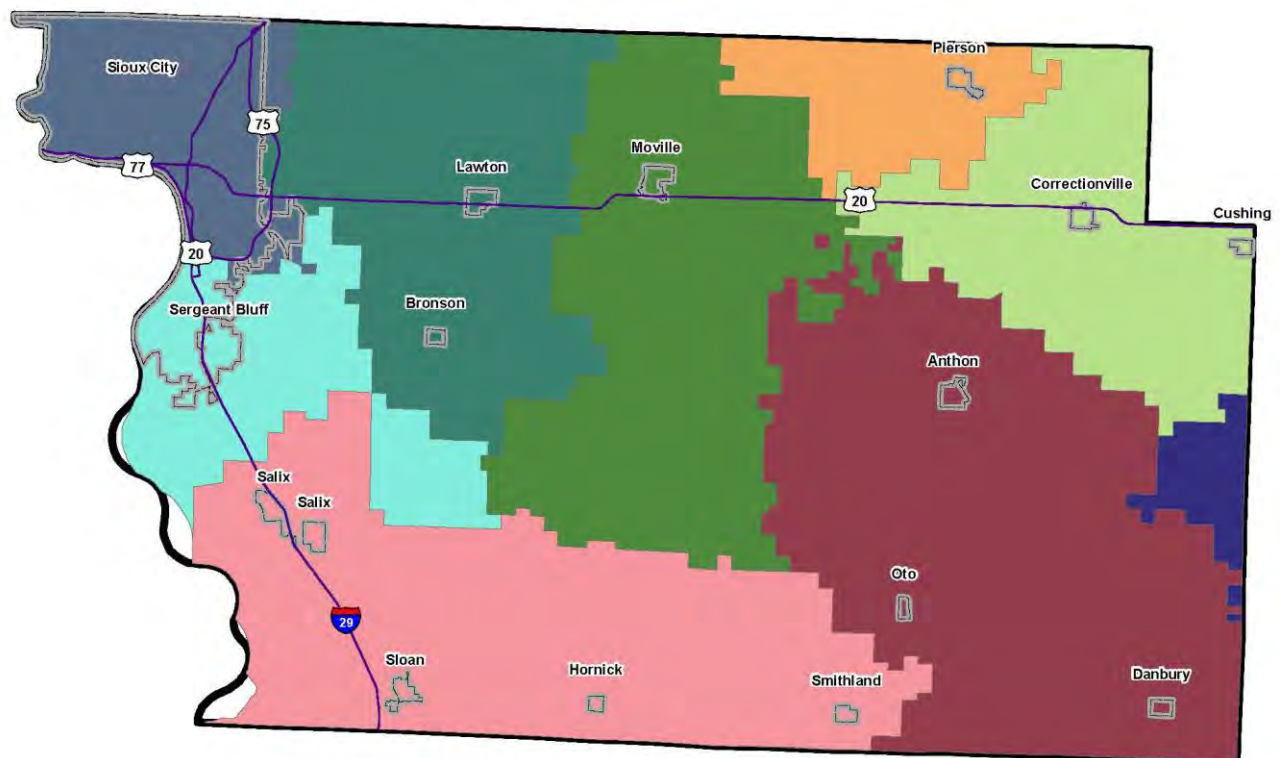


## Education

Within Woodbury County there are 48 public schools divided into six (6) school districts. These districts include:

- Lawton-Bronson Community School District, Lawton
- River Valley Community School District, Correctionville
- Sergeant Bluff-Luton Community School District, Sergeant Bluff
- Sioux City Community School District, Sioux City
- Westwood Community School District, Sloan
- Woodbury Central Community School District, Merville

### School Districts, Woodbury County



In addition, there are eight (8) private schools located within the County. The Sioux City Career Academy provides an alternative learning environment for students within the Sioux City Community School District.

While there are no public universities located with Woodbury County, there are a several other higher education institutions. Western Iowa Tech Community College is a public two-year college located in Sioux City. Private non-profit institutions include Briar Cliff University and Morningside College, also located in Sioux City.

Woodbury County generally has a higher percent of residents with a high school degree or some college compared to the state of Iowa. However, the County falls behind within the categories of bachelor’s degree and graduate or professional degree.

<b>Level of Education</b>	<b>Woodbury</b>	<b>Iowa</b>
No high school diploma	13.22%	8.16%
High school degree (includes equivalency)	34.26%	31.52%
Some college, no degree	22.22%	21.31%
Associate’s degree	10.19%	11.34%
Bachelor’s degree	14.33%	18.71%
Graduate or professional degree	5.77%	8.97%

### *Population*

Based on 2010 census data, the population of Woodbury County was 102,172. American Community Survey (ACS) data estimates show the 2017 population at 102,397, indicative of a generally stable population. Focusing on the unincorporated areas of Woodbury County, the population in 2010 was 8,200, and 2017 population decline slightly to 7,911. Taken together, this reveals individuals could be moving out of unincorporated areas and into cities – a trend seen nationwide.

Looking to the future, growth is possible under the maximum growth rate scenario. However, slight population decline is more likely, as illustrated in 2 out of 3 scenarios.

According to 2013-2017 ACS 5-year estimates, the median household income is \$51,350, which is slightly lower than the median household income for the state of Iowa at \$56,570. Woodbury

County does have a slightly higher percent of its population living below the poverty level compared to Iowa, at 14% and 12% respectively.

While there are slight variations in the proportions of vulnerable population categories, in general Woodbury County is in line with the State.

<b>Community Characteristics</b>	
Population (2010)	102,172
Unincorporated Population (2010)	8,200
Population (2017)	102,397
Unincorporated Population (2017)	7,911
Total Households	38,962
Median Household Income	\$51,350
Median Household Income – Iowa	\$56,570

<b>Population Projections</b>			
	MIN (Growth Rate = -0.45%)	MEAN (Growth Rate = -0.2%)	MAX (Growth Rate = 0.55%)
2010	102,172	102,172	102,172
2020	97,628	101,966	107,995
2030	93,285	101,760	114,150
2040	89,136	101,555	120,656

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Region</b>
5 years and younger	7,488	7.3%	6.78%
65 years and older	14,481	14.3%	16.01%
Below the poverty level	14,336	14.0%	12.88%
Living with a disability	12,613	12.4%	12.41%

### *Housing*

Total housing units in Woodbury County is 41,915. Of those, 38,962 are occupied resulting in a 7% vacancy rate. Within the category of occupied housing units, 25,920 are owner-occupied, while 13,042 are renter-occupied. Median home value is \$110,700, which is nearly \$27,000 less

than the state median home value. Median rent is more similar to Iowa at \$723. This is only \$17 less than the State.

<i>Housing Characteristics</i>	<i>Woodbury</i>	<i>Iowa</i>
Median Home Value	\$110,700	\$137,200
Median Rent	\$723	\$740
	<i>Count</i>	<i>Percent</i>
Total Housing Units	41,915	-
Occupied	38,962	93.0%
Owner-occupied	25,920	66.5%
Renter-occupied	13,042	33.5%
Vacant	2,953	7.0%

*Income & Economics*

The table below communicates the quantity and proportion of employed individuals within each industry. The total employed population of Woodbury County is 51,486. The three leading industries are:

1. Education services and healthcare and social assistance
2. Manufacturing
3. Retail trade

Employers within the first industry include the various school districts, including the Sioux City Community School District, which is a leading employer in the County. This category also includes healthcare professionals, including employees of Mercy Medical Center and UnityPoint Health. The second leading industry is manufacturing. Many communities within the county trace their origins to manufacturing in the late 1800s and early 1900s. This legacy clearly carries on to today. Within this industry, the leading employer is Tyson Food Inc.

Notable expansions in recent years include \$128,000,000 investment agreement between the County and Ag Processing Inc., approved November 20, 2015. Another between the County and Gelita USA for \$21,990,000 (signed May 9, 2017), and completion of an expansion project with CF Industries Nitrogen, LLC for \$1,690,000,000 signed in 2013 came to close in 2019.

<b>Industry for the Civilian Employed Population 16 and over</b>		
Civilian employed population (16 and older)	51,486	-
Agriculture, forestry, fishing and hunting, and mining	1,142	2.2%
Construction	3,664	7.1%
Manufacturing	9,114	17.7%
Wholesale trade	1,638	3.2%
Retail trade	6,479	12.6%
Transportation and warehousing, and utilities	2,391	4.6%
Information	764	1.5%
Finance and insurance, and real estate and rental and leasing	2,263	4.4%
Professional, scientific, and management, and administrative and waste management services	3,486	6.8%
Education services and health care and social assistance	11,484	22.3%
Arts, entertainment, and recreation, and accommodation and food services	4,890	9.5%
Other services except public administration	2,370	4.6%
Public administration	1,801	3.5%

Budgeted projects included in the Capital Improvement Plan and the scheduled Equipment Replacement Plan factor into mitigation in various ways. From ensuring access, to establishing security and sound infrastructure, daily decisions at the County level continue to contribute to its resiliency.

For consideration in determining the benefit of given mitigation projects, the County's valuation of assets based on the County's 2018 insurance policy as shown below.

620 Douglas Street - Specific Limit	\$	67,000,000
Building Limits	\$	62,802,667
Business Personal Property Limits	\$	<u>9,019,313</u>
<b>Total</b>	<b>\$</b>	<b><u>138,821,980</u></b>

It is important to note that county actions are likely to impact more than just county properties/assets. Each project as submitted shall take into account the values assessed to the affected jurisdiction(s) and entities.

### Participation

Meetings specific for the development of the Woodbury County portion of the Hazard Mitigation Plan were conducted with the County Engineer/Department of Secondary Roads Director, Mark Nahra and County EMA Becca Socknat on June 3, 2019 at the Engineer’s Office in Moville. A second meeting was conducted on June 18, 2019 at the Security Institute, WITCC. The following were present in addition to SIMPCO staff:

Becca Socknat	EMA Coordinator
Gary Brown	Emergency Management Services Director
Todd Wieck	Sheriff’s Office
Dan Priestly	Zoning Coordinator
David Gleiser	CED Director
Julie Conolly	Assessor
Rocky DeWitt	Supervisor

Some meetings noted in the Region portion included data specific to Woodbury County and such is referenced as applicable. Communications via telephone and email further contributed to the data included in this section of the Plan.

### Capabilities

<b>Plans/Guidance Documents</b>	
<ul style="list-style-type: none"> <li>• Comprehensive Plan</li> <li>• Builder’s Plan</li> <li>• Capital Improvement Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Local/County Emergency Plan</li> <li>• County Recovery Plan</li> <li>• Land Use Plan</li> </ul>
<b>Policies/Ordinance</b>	
Building Code	Roof Load Capacity Ordinance
Debris Management Plan	Storm Water Ordinance
Drainage Ordinance	Subdivision Ordinance
Floodplain Ordinance	Tree Trimming Ordinance
Nuisance Ordinance	Zoning Ordinance
<b>Programs</b>	
Zoning/Land Use Restrictions	
Codes Building Site/Design	
National Flood Insurance Program (NFIP) Participant	CID #190536

Hazard Awareness Program	
Property Acquisition	
<b>Programs</b>	
Planning/Zoning Boards	
Tree Trimming Program	
Mutual Aid Agreements	28E agreement with all communities within Woodbury County
<b>Staff/Department</b>	<b>Comments</b>
<ul style="list-style-type: none"> <li>• Building Code Official</li> <li>• Building Inspector</li> <li>• Mapping Specialist (GIS)</li> <li>• Engineer</li> <li>• Development Planner</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency Management Coordinator</li> <li>• NFIP Floodplain Administrator</li> <li>• Emergency Response Team</li> <li>• Historic Preservation</li> <li>•</li> </ul>
<b>Non-Governmental Organizations</b>	<b>Comments</b>
American Red Cross	Sioux City
Salvation Army	Sioux City
Veterans Groups	in communities
Homeowner Associations	in some cities
Neighborhood Associations	in some cities
Chamber of Commerce	Sioux City
Community Organizations (Lions, Kiwanis, etc.)	in communities
<b>County Funding Abilities &amp; Authorities</b>	
Ability to apply for Community Development Block Grants	
Authority to levy taxes for a specific purpose	
Levy taxes for a specific purpose	
Impact fees for new development	
Incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Withhold spending in hazard prone areas	

Record of Capital Improvement Plan and Equipment Replacement Plan for the County from 2013 through 2017 (as approved in 2012) included a number of mitigation-related improvements. Equipment additions, upgrades and replacements, technological and security improvements, sheltering structures in recreation areas, drainage projects, structural

stabilization (roof replacement, etc.), and riprap projects exemplify multi-faceted projects serving several purposes.

#### *Review of Actions Taken*

Follow is a status update for action and strategies as identified for the County in the 2014. Information as provided closes the stated action items unless specifically noted here and added to the 2019 list of Mitigation Actions, Strategies, and Projects as included in Title III Region, Section G of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No formal list is maintained. Community websites provide info on public buildings/spaces. Cooling sites not necessarily air conditioned – may offer shade, air movement, and/or water (misting station, drinking fountain, pool, etc.).

Action has not been taken by the county to add tornado-safe storm shelters. The County has modified action 4.2.1 for inclusion in the plan update. The strategy clarifies need to state: Identify need, design, and develop storm shelters.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No action taken at county level.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security improvements have been made at many county facilities including the Courthouse, Law Enforcement Center, Trosper Hoyt, and the Climbing Hill facility. The county has two portable pumps on hand (4” & 6” capacities). A larger one with “trash” pump



specifications is available but more are needed – especially when flooding is a region event as opposed to localized. The County is working on ensuring placement of standby generators at all community centers.

Additional equipment for response teams and related need is identified at the jurisdiction level. Training is funded through several programs at county, region, state, and national programs. However, time for volunteers to travel to and attend training is severely limited. Remote education opportunities are needed, via web meeting or archived training adapted to be interactive.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Property acquisition in order to restrict development has not been implemented, nor is it in consideration. Drainage patterns are considered within county road and development projects. Debris accumulation has been noted as the largest contributor to flow and drainage problems. From trapped vegetation and trash, to debris and chemicals carried along with the flow of water. County operations include scheduled maintenance of such within county jurisdiction. Local code review and revision is needed to address prevention opportunities within property maintenance ordinances. The Owego Wetlands area has been designated for preservation (between Salix and Sloan/US 75 and the bluffs).

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* Projects in CIP are cross-referenced with other plans to ensure all components are put into consideration. Projects as completed in the Secondary Roads Department are available for review at <https://www.woodburycountyiowa.gov/capital-project-list>. Most have a direct or indirect impact on mitigation.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Access is addressed continuously through grading, ditch maintenance, and mowing in right-of-way. No action was taken on the elevation element of this item.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* The County is a participant in NFIP and working on measures to reduce participant costs for communities.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** County Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Trees are under local parks departments and County Secondary Roads depending on location. Each has own mode of operation addressing needs and implementing them. A Tree Board is not in place, nor is a county ordinance. Direction can be provided through the County Conservation Board and the DNR as needed. The Conservation Board offers education programs (more info can be found at <http://woodburyparks.org/educational-programs>).

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are more appropriate for communities. A set of building standards has not been adopted. The state has adopted electrical standards, establishing requirements for electrical work completed in Iowa. County floodplain information is undergoing revision and is currently in draft status through the Iowa Flood Center. County representatives participated in Draft Flood Hazard Product sessions and will continue to do so. Ordinances are routinely reviewed and revised as appropriate.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Several levels of authority contribute to declaration of weather/conditional burn bans with some county departments included. A uniform ban is not in place for unincorporated areas.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* County Emergency Management has resources available at their office and online. They are present in public venues (County Fairs) increasing awareness and emergency preparedness.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A communications plan is in place. Community warning systems are all in place and improvements are being made annually through county and community collaborations. The county purchased and issued weather radios to schools and critical facilities within the past few years. Community warning systems include tornado sirens as well as access to subscription alerts systems. Additional warning sirens have been added at Snyder's Bend and Brown's lake.

### Risk Assessment

March 2019 proved to be a standout occurrence of flooding and extreme temperature fluctuations possible in the region. For Woodbury County alone, significant loss was experienced by hundreds of households. In summation of a presentation given (September 2019) by Becca Socknat regarding the onset of March, there were 508 registrants for federal public assistance. Totaling \$743,975, 325 in awarded funds, homeowners applied for assistance through the Individuals and Households Program. Under the county's SBA program, 499

applications were submitted (440 homeowners, 59 businesses) with total allocated funds of \$936,800 for 43 homeowners. At the time of the presentation, several applications for those and other programs were still pending.

Isolated incidents aside, Woodbury County has a minimum of 79 bridge projects pending for the next 5-10 years, ranging from scouring and rip rap to full replacement (about 30). While structures are primarily deteriorating due to age, severe weather has accelerated decline in infrastructure integrity.

Severe winter weather is noted as having a significant impact on city budgets. Snow removal, urgent repairs, and water main breaks due to extreme cold have all been recurring in the past 5 years. Sinkholes are becoming more prevalent in local news, particularly in locations where aging underground infrastructure has been compromised due to shifting in freeze/thaw cycles.

The County stated that nine (9) high hazard dams have been identified at NRS within the region that are in or affect Woodbury County.

*Priority Hazards*

- Flood – River and Flash
- Dam Failure/Levee Failure
- Tornado/Windstorm

*Record of Events*

The NOAA Storm Event Database states 146 events reported from 7/1/2014 to 10/31/2019 (1949 days) in Woodbury County. Classification of terms as called in varies, however, thunderstorms, hail, flood, and winter weather are the most frequently reported. Heat/excessive heat was included in seven (7) events. A single report of funnel cloud was also listed.

Number of County/Zone areas affected	8		
Number of Days with Event	95		
Number of Days with Event and Death	1	Heat	
Number of Days with Event and Death or Injury	1	Heat	
Number of Days with Event and Property Damage	7	Thunderstorm wind; Flood	\$ 6,918,000
Number of Days with Event and Crop Damage	2	Flood	\$ 2,055,000

Number of Event Types reported	37
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Sources: <https://www.bestplaces.net/climate/county/iowa/woodbury>  
<https://iowadot.gov/analytics/pdf/secbook2019.pdf>

## Jurisdictions

### 1. Anthon

#### a. Profile

The city of Anthon is situated in the center of the east half of Woodbury County. The City is located along State Highway 31, with the majority of the total area situated southeast of the highway. The Little Sioux River serves as the eastern border.

More information can be found on the city of Anthon website.

#### Land Use & Floodplain Map

#### *City Governance & Community Supports*

Anthon is governed by a five (5)-person elected City Council and the Mayor. Offices in addition to Mayor and Council include City Clerk and Public Works. The Anthon Fire Department is independent of the city but does receive some funding from Anthon. The City contracts with the County for law enforcement and maintains a 28E agreement with Anthon Community Ambulance Service, Inc. for medical response services. This ambulance service is staffed by volunteers.

The city of Anthon is a member of the NFIP program. The Comprehensive Plan is currently being updated and has not yet been adopted.

#### *Demographics, Housing, & Economics*

Based on 2010 census data, the population of Anthon was 565. American Community Survey (ACS) data estimates the 2017 population at 651, indicating population growth. According to the 2013-2017 ACS 5-year estimates, the median household income is \$44,375 with 13.4% of the population falling below poverty level.

Like many smaller communities, Anthon’s population is aging. This is reflected in the ACS data, which reveals 18.6% of the population is 65 years or older. This is higher than both Woodbury County and the state of Iowa.

<b>Community Characteristics</b>	
Population (2010)	565
Population (2017)	651
Total Households	277
Median Household Income	\$44,375
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	24	3.7%	7.3%	6.3%
65 years and older	121	18.6%	14.3%	16.0%
Below the poverty level	87	13.4%	14.0%	12.0%
Living with a disability	87	13.4%	12.4%	11.6%

Total housing units in 2010 was 295, of those, 263 units were occupied resulting in a 6.4% vacancy rate. According to the ACS, no housing units have been completed since 2014. About 82.1% of Anthon’s housing stock is 50 or more years old.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	296	-
Occupied	277	93.6%
Vacant	19	6.4%
Mobile Homes	5	1.7%
<b>Age of Residential Structure</b>		
Built 2000 or later	9	3.0%
Built 1970 – 1999	44	14.9%
Build 1969 or earlier	243	82.1%

More demographic and community data can be found on the [U.S. Census webpage for Anthon](#).

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets:

Building	\$ 4,800,412
Personal Property	\$ 296,640
Property in the Open	\$ <u>1,551,663</u>
<b>Total</b>	<b>\$ <u>6,648,715</u></b>

*Leading Employers*

The following businesses employ the largest number of employees within the City of Anthon:

- Maple Valley-Anthon Oto Community Schools
- Fireside Steak and Lounge

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities (including Parks and City Gathering Locations)

City Hall	301 E Main St,
Substation	Hwy 31 South
Community Bldg	110 N 5th Ave
Stahl Park	510 State St
Sewer Plant/Lift Station	
House, Pump, & Well	506 W Main St
Warehouse/Office	200 W Main St
Pump House/Warehouse	504 W Main St
Town Hall	301 E Main St
Town Garage	510 W Main St
Water Treatment Plant	508 W Main St
Water Tower	501 W Bridge St
Well & Control Panel	601 E Bridge St
Honey House	506 State St

Hamann Memorial Library	311 E Main St
Sand Bunker	South End of Town @ Tree Dump
O'Neil Park	
Lee Schroeder Memorial Park	203 Westgate Rd
Forsling Park	
Grocery Store	201 E Main St

Community Supports, Vulnerable Populations, &/or Gathering Locations

Anthon Fire-Rescue	4035 Fox Ave
US Post Office	109 N 2nd Ave
MVAO Elementary School	110 West Division
MVAO Middle School	
Anthon United Methodist Church	401 E Bridge St
St Joseph's Church	400 E Randolph St
Trinity Lutheran Church	106 E Arnold St
McDuffy's Pizza	200 E Main St

b. *Participation*

A planning meeting via phone conference was conducted on May 21, 2019 with City Clerk Ruth Groth and Utilities Clerk Amy Buck in attendance. Additional input was provided by Public Works Superintendent Mike Kerns.

c. *Community Capabilities*

In addition to supports as available through county, region, and state programs, the City of Anthon has the following local resources available.

<b>Capabilities</b>	
Comprehensive Plan	
Local Emergency Plan	
County Recovery Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Drainage Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Storm Water Ordinance</li> <li>• Subdivision Ordinance</li> </ul>



<ul style="list-style-type: none"> <li>Floodplain Ordinance</li> <li>Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>Tree Trimming Ordinance</li> <li>Zoning Ordinance</li> </ul>
<b>Programs</b>	
<ul style="list-style-type: none"> <li>Tree Trimming Program</li> </ul>	<ul style="list-style-type: none"> <li>Zoning/Land Use Restrictions</li> </ul>
Codes Building Site/Design	Refer to State's Code
National Flood Insurance Program (NFIP) Participant	CID #190236
ISO Fire Rating	Anthon Class 8, eff 3/1/1995; Anthon FD, class 8/9, eff 3/1/95
<b>Staff/Department</b>	
Building Code Official	Mayor
Building Inspector	Mayor
Public Works Official	Public Works Superintendent
Emergency Manager	City Clerk @ city level
Emergency Response Team	Anthon Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	McNiff Post 389
Community Organizations	Anthon Community Club
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, and electric services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>general obligation bonds</li> <li>special tax bonds</li> <li>private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A separate list of cooling stations is not maintained. Public parks have shade trees and some shelters are in place. City Hall and the Community Building are available when open.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* The FD had a program in place within the last two or three years, likely to maintain as long as there is a need.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* City security procedures and equipment are assessed and updated as needed. No recent improvements or additions have been made. A generator is now in place for the water plant. Additional generators are needed at the lift station and City Hall. An ATV or snowmobile would aid city staff in maintaining access to utilities in all conditions. Training to maintain certifications is readily available. Additional equipment needs for response departments have not been identified.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No action has been taken on property acquisition. None is planned. No action has been taken on drainage projects aside from routine ditch maintenance and systemic clearing. There are several parks throughout Anthon contributing to preservation of natural open space.

**Action 2.2.1:** Capital Improvements Program.

*Status:* A formal CIP has not been implemented but is part of Anthon's recently completed comprehensive plan. All projects are discussed within context of coordinating multipurpose investments in both current and prospective projects.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Anthon participates in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Tree Plantings include variation of types and includes recommended actions as determined by the Council. Replacement is determined case-by-case. Council determines action related to trees in lieu of a tree board. City Ordinances include language addressing maintenance and responsibility of trees within the public right-of-way and parking. An education program is not in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision standards are reviewed periodically. The city defers to state code for building standards. Floodplain regulations are in place and on-going.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Action has not been taken on this item. The city does communicate restrictions based on issued flag warnings.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* The city has an established network of communicating with residents using the local cable access station, Facebook, and scrolling marquee. Not specifically planned for preventive awareness, such info can be included in future messages/postings.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A snow route plan for removal is in place, addressing access to schools and businesses first. Roadway access has not been an issue causing need for a developed snow plan.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No shelter with a formal tornado-refuge designation is in place. Informal shelters are available at the Methodist Church and community center. Additional refuge from extreme heat and cold can be sought at the schools and community center, when in use. There is interest in assessing potential of a remote access system for the community center enabling controlled access when not in use.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communications are already well established. Alert Iowa subscription alert system is available, as are several tech-based alert applications. Weather radios are not in place, and

expectation is they would not be used. The FD and Communications Center are connected through local radio channels and maintain in-time communication as needed. One warning siren is in place, located at City Hall. The siren is sounded through County Communications Center, but can be initiated from the City.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders often offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Floodplain wraps around the east side of Anthon, covering a good portion of the city's southeast quadrant. Most affected land is designated for agriculture use. Only two events are reported showing Anthon in the NOAA Storm Event Database in the most recent 5-year period available – Thunderstorm wind and Hail. Some work completed on a new access bridge is in needed of additional work due to washout during 2019's flood events.

##### *Priority Hazards*

- Flood – Flash and River
- Thunderstorm w/Hail & Lightning
- Tornado/Windstorm

#### e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City of Anthon are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 2. Bronson

### a. Profile

The city of Bronson is centrally located in the western half of Woodbury County. County Highways K42 and D38 intersect in Bronson. Elliot Creek runs through the southeast corner of city limits, and Elliot Creek and Deer Creek converge just east of the City.

#### *City Governance & Community Supports*

Bronson is governed by a five (5)-person elected City Council and the Mayor. Offices in addition to Mayor and Council include City Clerk. Fire and rescue services are provided by the Bronson Fire Station, which is staffed by volunteers. The City contracts with the County for police protection services.

Bronson is a member of the NFIP program. The Municipal Code of Ordinances and the Comprehensive Plan are both in the process of being updated. The Municipal Code of Ordinances should be completed November 2019.

#### *Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Bronson was 322. American Community Survey (ASC) data estimates show the 2017 population at 295, indicative of slight population decline. According to 2013-2017 ACS 5-year estimates, the median household income is \$65,583, significantly higher than Woodbury County, which is estimated to be \$51,350. Bronson also a smaller percent of its population below the poverty level when compared to Woodbury County, at 5.8% and 14% respectively.

In general, Bronson has a smaller percent of its population within any category that FEMA identifies as a vulnerable population compared to Woodbury County and the state of Iowa.

<b>Community Characteristics</b>	
Population (2010)	322
Population (2017)	295
Total Households	101
Median Household Income	\$64,583
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	21	7.1%	7.3%	6.3%
65 years and older	29	9.8%	14.3%	16.0%
Below the poverty level	17	5.8%	14.0%	12.0%
Living with a disability	26	8.8%	12.4%	11.6%

Total housing units in Bronson is 111. Of those, 101 are occupied resulting in a 9% vacancy rate. The vast majority of Bronson’s housing stock was constructed before 2000 at approximately 92%, with over half of that being older than 50 years of age. Only nine houses have been constructed in the last 20 years.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	111	-
Occupied	101	91.0%
Vacant	10	9.0%
Mobile Homes	4	3.6%
<b>Age of Residential Structure</b>		
Built 2000 or later	9	8.1%
Built 1970 – 1999	43	38.7%
Build 1969 or earlier	59	53.2%

More demographic and community data can be found on the [U.S. Census webpage for Bronson](#).

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

#### 2019 Valuation of City Assets

Building	\$	1,679,886
Personal Property	\$	76,400
EDP-Hardware	\$	3,000
EDP-Software	\$	3,000

Misc Property Sched \$ 73,100  
**Total \$ 1,835,386**

*Leading Employers*

City of Bronson City Hall
Randy's Auto
Lawton-Bronson Community School District

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities (including Parks and City Gathering Locations)

City Hall/Community Center	100 1st St E
City Maintenance Shed	90 Pine St
Water Tower	214 3rd St
Lift Stations & Related	524 E Front St
	Front St (West End)
Parker-Smith Athletic Complex	100 Walnut
Well House	213 3rd St
Lagoon	
Bronson Ambulance	
Bronson Ball Park	100-198 Maple Street,

Community Supports, Vulnerable Populations, &/or Gathering Locations

City of Bronson City Hall
Randy's Auto
Lawton-Bronson Community School District

**b. *Participation***

A planning meeting was held at Bronson City Hall on May 10, 2019. In attendance were Mayor Tony Thompson and City Clerk Lindy Jessen. A public input opportunity was in place for Bronson's 4<sup>th</sup> of July Community Celebration. A display board and comment cards were available, though none were completed and submitted.



c. *Community Capabilities*

Locally developed and available supports in the table below are supplemented by resources available through county, region, and state programs.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
Building Code	Subdivision Ordinance
Floodplain Ordinance	Zoning Ordinance
Nuisance Ordinance	
<b>Programs</b>	
Zoning/Land Use Restrictions	
National Flood Insurance Program (NFIP) Participant	CID #190287
Floodplain management program	
<b>Programs</b>	
ISO Fire Rating	Bronson class 9; Bronson FD, class 9/10
<b>Staff/Department</b>	
Public Works Official	
NFIP Floodplain Administrator	role filled by City Clerk
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Authority to levy taxes for a specific purpose	
Fees for water, sewer services	
Ability to incur debt through:	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Ability to withhold spending in hazard prone areas	

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are

considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No formal list of cooling stations is maintained. The City Park has a shelter, and City Hall and the Community Center may be used when open. Most public operations would allow someone to come in to cool off. Shelter from inclement weather in general is available in the same locations. Community Center can be opened if needed. No formal tornado shelters are in place. Development is not currently being considered.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No action on this item has been taken. Fire Department may consider implementation if funding available.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security procedures have not been changed. An emergency generator is in place at City Hall. The Fire Department has one ATV used as needed in response situations. The city has two pumps on hand, but needed to rent additional during the flooding events in 2019. No training or equipment needs have been identified.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* An acquisition plan is not in place. The city-owned ball fields and shelter are located in the floodplain, maintaining only structures that may reasonable withstand flooding conditions. Remaining floodplain is designated for Ag use. Lines were cleared, improving and redirecting water flow. Drainage field is sloped away from roadway. Fire department is contracted to blow out ditches as means of maintenance. Some excavations were completed along Pine St near the Community Center. A retention pond is in discussion for implementation.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Projects are reviewed on a case-by-case basis. Comp plan was near completion at time of planning meeting. It incorporated CIP components that have not yet been implemented.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Bronson is an NFIP participant.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A formal Tree Planting plan is not in place; however, council is reviewing implications of potential for Emerald Ash Borer Beetle. Council responds to tree issues and induces action as needed in lieu of a tree board. City code includes basic language addressing tree maintenance, particularly in the public right-of-way. No formal education programs are in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision Regulations are included in the City Code. Building standards are regulated through the permitting process and State Building Codes have been adopted by reference. Floodplain Regulations are in place and on-going.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* No restricted burning ordinance is in place. A city burn pile is available with burn schedule dependent on conditions. Private burning not restricted except in terms of creating a nuisance.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* The city may promote awareness and preparedness education through established communication network – public postings and city website. Utility billings may include a message as needed. City is interested in setting up an electronic bulletin board to facilitate communication. No formal plan is in place.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* An informal road maintenance route is in place, addressing school routes first along with routes leading to County road.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city website will serve as primary communication during and after hazard events. Primary warning system for the community is the siren. A weather radio is available at City Hall, though would serve purpose better in homes. FD volunteers are trained spotters and contribute to early warning efforts.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Bronson has floodplain designation for nearly half of its incorporated boundaries. Most property to the south of Front Street is agricultural; however, some developed properties are impacted. Bronson is included in records of two storm events as reported in the NOAA database – both were Hail. During flooding events, most damage was incurred by curious residents traveling through flooded areas, furthering damage on compromised roads.

*Priority Hazards*

- Flood
- Tornado/Windstorm
- Grass or Wildland Fire (and its potential effects on local business and residential structures)

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for Bronson are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

### 3. Correctionville

a. *Profile*

The city of Correctionville is located in the northeastern portion of Woodbury County, near the county border. Most of the City is located south and adjacent to U.S. Highway 20, with a small portion situated north of the highway. County Highway L36 turns into Aspen Street, which serves as the western edge of the city.

Meandering to the north and west is the Little Sioux River. Bacon Creek is located south of the City. The Sioux Bend Wildlife Area is just west of Correctionville, and shares a border with the west bank of the Little Sioux River. South of that is Copland Park, a significant green space. More information can be found at the City of Correctionville website.

*City Governance & Community Supports*

Correctionville is governed by a five (5)-person City Council and the Mayor. In addition to these offices, the city is also supported by City Hall (City Clerk) Board of Adjustment, Zoning Commission, and two maintenance personnel. Correctionville is also served by two municipal boards, which are the Zoning Commission and the Board of Adjustments. The City contracts with the county for police protection services. Fire and rescue services are provided by the Correctionville Fire Department, which is staffed by volunteers.

The City of Correctionville is a member of the NFIP program. The Municipal Code of Ordinances was last updated in September 2018. The Comprehensive Plan was adopted in February 11, 2019.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Correctionville was 821. American Community Survey (ACS) data estimates show the 2017 population at 832, indicating a relatively stable population. According to the 2013-2017 ACS 5-year estimate, median household income is

\$41,181, which is nearly \$10,000 less than Woodbury County’s median income. Despite relatively lower incomes, the City has a smaller percent of its population below the poverty level when compared to Woodbury County, at 7.8% and 14.0% respectively.

Correctionville has over a quarter of its population over the age of 65. FEMA identifies this age group as a vulnerable population.

<b>Community Characteristics</b>	
Population (2010)	821
Population (2017)	832
Total Households	347
Median Household Income	\$41,181
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	28	3.4%	7.3%	6.3%
65 years and older	218	26.2%	14.3%	16.0%
Below the poverty level	65	7.8%	14.0%	12.0%
Living with a disability	140	16.8%	12.4%	11.6%

Total housing units for Correctionville is 415. Of those, 347 are occupied resulting in a 16.4 vacancy rate. This is relatively high for the area. Like much of Woodbury County, Correctionville’s housing stock is aging. Nearly two-thirds of existing homes were constructed over 50 years ago. Since 2000, 40 new homes have been introduced to the housing stock.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	415	-
Occupied	347	83.6
Vacant	68	16.4
Mobile Homes	11	2.7
<b>Age of Residential Structure</b>		
Built 2000 or later	40	9.6
Built 1970 – 1999	95	22.9
Built 1969 or earlier	280	67.5

More demographic and community data can be found on the U.S. Census webpage for Correctionville.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	4,419,898
Personal Property	\$	527,210
EDP - Hardware	\$	29,320
Misc Property Sched	\$	163,026
Misc Property Unsched	\$	<u>97,000</u>
<b>Total</b>	<b>\$</b>	<b><u>5,236,454</u></b>

Leading Employers

Following are some of Correctionville's leading employers

River Valley Community School District
Western Iowa Cooperative
Dixon Construction Co
Mathers Construction Co

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

City Hall/Community Bldg	312 Driftwood
Firehouse/Ambulance	315 Cedar
Garage/Storage	
Warehouse	701 5th St
Tennis Court	824 Hackberry
Library	532 Driftwood
Water Tower	705 5th St
Water Treatment Plant	



Pump House	
Pool Facility & Related	815 8th St
Pump House	
Emergency Well	416 7th St
Generator Bldg/Lift Station	4138 160th St
American Legion Bldg	119 Driftwood
Military Displays	
Copeland Park	4173 S Hwy 31
Storm Siren	522 Driftwood
Van Houten-Southwell Roadside Park	4138 160 St

Community Supports, Vulnerable Populations &/or Gathering Locations

River Valley High School
Correctionville Nursing & Rehabilitation
Valley Lodge Assisted Living
MercyOne Correctionville Family Medicine
The Stirring @ 403
GAR Hall / Vet Center
New Beginnings Church
Church of Christ
Grace Lutheran Church
Grace United Methodist Church

b. *Participation*

A planning meeting was conducted at Correctionville City Hall on May 2, 2019 with the following participants in attendance.

Nathan Heilman	Mayor
Carla Mathers	City Clerk
April Putzier	Deputy Clerk
Dan Volkert	Councilmember
Adam Petty	Council & Fire Dept rep
Chris Lilleflorin	City Staff

A public input opportunity was in place at the Congregate Meal Site in Correctionville. A brief presentation about natural hazards was provided and a display board and comment cards were left on-site. Five responses were submitted with Correctionville indicated as respondent jurisdiction.

c. *Community Capabilities*

<b>Capabilities</b>	
Comprehensive Plan	
Local Emergency Plan	
Watershed Plan	
Firewise or other fire mitigation plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>Floodplain Ordinance</li> <li>Nuisance Ordinance</li> <li>Subdivision Ordinance</li> <li>Provision for Historic Preservation</li> </ul>	<ul style="list-style-type: none"> <li>Tree Trimming Ordinance</li> <li>Zoning Ordinance</li> <li>Provision for Drainage</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
National Flood Insurance Program (NFIP) Participant	Yes, CID #190288
ISO Fire Rating (not updated)	Class 8/9
Property Acquisition	as needed
Planning/Zoning Boards	
Tree Trimming Program	
<b>Staff/Department</b>	
Public Works Official	
Emergency Management Coordinator	City Clerk is the emergency manager for the city
Emergency Response Team	Fire and Rescue
Historic Preservation	
<b>Non-Governmental Organizations</b>	
<ul style="list-style-type: none"> <li>Chamber of Commerce</li> </ul>	<ul style="list-style-type: none"> <li>Veterans Groups</li> </ul>
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	

Fees for water, sewer services
Ability to incur debt through <ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* Formal designations of cooling stations and other refuge locations have not been implemented. There is concern about access to safe spaces when the community center and city hall are closed.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* Through Red Cross, smoke detectors were distributed throughout the entire community, complete with installation.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Equipment updates have been made by way of generators being added to the lift stations. Two large generators and one small are in place for use by the City as needed. The FD has one small generator used for response. Plan is in place to include a generator to the water plant in conjunction with its expansion. Additional equipment to enable access to

remote or otherwise inaccessible areas would benefit response operations. As grass fires are an issue locally, an ATV with water tank capacity would improve response, and further reduce risk. Coordinated training is in place for response teams. No unmet needs have been identified.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Property acquisition is not applicable for Correctionville. A major road project on Highway 20 was completed recently, and some drainage components were implemented, more are needed. In town, 5<sup>th</sup> St was raised. "Bowl" configuration of city complicates road elevation implementations. Ground water level is an ongoing concern. Preservation of natural open spaces is not formally in place, though parks do serve the purpose.

**Action 2.1.5:** Roadway Elevation and Access.

*Status:* Some lower elevation state roadways were improved, more need attention.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Projects are presented on a case-by-case basis, CIP is not in place.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Correctionville is a longstanding participant in the NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A Tree Ordinance is in place. It addresses planting to some extent and maintenance. Council acts on tree-related issues in lieu of a tree board. An education program is not in place; however, information regarding tree types is included in the ordinance.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision Regulations are in place in the City Code. Floodplain development is prohibited without prior approval of DNR. A property maintenance code has been adopted, however, no formal reference is given to an established set of building standards.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* County/regional issued bans are followed, however, a local ban is not in place.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* The city promotes awareness through preparedness pamphlets (from County EMA) and periodic information on established networks. No ongoing programs are in place. Information as pertinent to an immediate situation may be communicated through the city's electronic sign. Alert Iowa subscription is actively promoted.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A route is planned but not written for maintenance of snow routes. No formal snow plan is in place.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No action was taken on this item.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communication networks are in place within the community. Alert Iowa and the warning siren are primary warning systems. Weather radio are not known to be in use at schools or critical facilities. The warning siren in Correctionville is sounded through the County Communications Center.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. Capacity for direct line access channels through cable are limited due to infrastructure in place.

#### d. *Risk Assessment*

##### *Contributing Factors*

Correctionville sits where Bacon Creek and Pierson Creek meet the Little Sioux River resulting in a large area within floodplain along its west side and within most of the southern border. Six events were attributed to Correctionville in the NOAA Storm Event Database during the most recent 5-year period available.

Thunderstorm w/Hail/Lightning is frequent and a considerable concern, especially when resulting in power outages. Hail damages are a concern, but have not in recent years of accrued reported damage costs. Responses as submitted through public input opportunities indicated Drought, Flood, Severe Winter Storm, Tornado/Windstorm, and Infrastructure Failure as causing the greatest level of concern.

#### *Priority Hazards*

- Flood
- Tornado/Windstorm
- Grass and Wildland Fire

#### *e. Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for Correctionville are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 4. Cushing

#### *a. Profile*

The city of Cushing is located near the eastern border of Woodbury County. The City is south of U.S. Highway 20 and bisected by 160th Street. Several small creeks and streams travel through city boundaries including Bacon Creek to the north.

#### *City Governance & Community Supports*

Cushing is governed by a five (5)-person elected City Council and a Mayor. Offices in addition to the Mayor and Council includes the City Clerk and Maintenance. The Cushing Fire Department is staffed by volunteers and provides emergency response services. The City contracts with the county for law enforcement services.

#### *Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Cushing is 220. American Community Survey (ACS) data estimates show the population declined slightly to 208. According to 2013-2017 ACS 5-year estimates, the median household income is \$43,500. This is lower than the county

average, which is \$51,350. Despite relatively lower incomes, the City has a smaller percentage of its population under the poverty level when compared to Woodbury County, at 4.9% and 14% respectively.

Cushing’s population contains proportionally more vulnerable residents than the County. Individuals older than 65 make up about a quarter of the total population. Further, 18.8% of the population is living with a disability. Both categories are considered by FEMA to be vulnerable populations.

<b>Community Characteristics</b>	
Population (2010)	220
Population (2017)	208
Total Households	84
Median Household Income	\$43,500
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	16	7.7%	7.3%	6.3%
65 years and older	52	25.0%	14.3%	16.0%
Below the poverty level	10	4.9%	14.0%	12.0%
Living with a disability	39	18.8%	12.4%	11.6%

Total housing units in Cushing are 103. Of those, 84 units are occupied resulting in an 18.4% vacancy rate. This is relatively high for the area. Less than 4% of the current housing stock was constructed after 2000, and just under two-thirds of houses in Cushing are 50 years or older.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	103	-
Occupied	84	81.6%
Vacant	19	18.4%
Mobile Homes	1	1.0%
<b>Age of Residential Structure</b>		



Built 2000 or later	4	3.9%
Built 1970 – 1999	36	35.0%
Build 1969 or earlier	63	61.2%

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building ACV	\$	157,429
RC	\$	584,578
Personal Property ACV	\$	6,597
RC	\$	204,273
Property in the Open RC	\$	<u>208,899</u>
<b>Total</b>	<b>\$</b>	<b><u>1,161,776</u></b>

Leading Employers

Wiese Construction
Anfinson Farm Store
United Bank of Iowa

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

City Hall	200 Main St,
Fire Department	201 Main St
City Maintenance Shop	203 Main St
Water Tower	302 Hill St
Pump House/Pump	1 <sup>st</sup> St
Pump House	90 Valley St
	101 Valley St
Library	202 Main St
Storage Shed	204½ Main St

City Park
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Community Supports, Vulnerable Populations &/or Gathering Locations

St. John Evangelical Lutheran Church, 206 School Street
Cushing Methodist Church, 506 2 <sup>nd</sup> Street
Old 20 Bar, 310 3 <sup>rd</sup> Street

**b. Participation**

A planning meeting was held in Cushing on July 9, 2019 with City Clerk Nicole Huisinga and Maintenance Superintendent Dave Carstens in attendance. Through efforts made to collect public input, brief presentations were provided in regional congregate meal sites. At each location, a display board and comment cards were left, enabling an extended period of public comment. One respondent indicated Cushing as jurisdiction represented.

**c. Community Capabilities**

Cushing has the following resources in place at the local level in addition to supports as available through county, region, and state programs.

<b>Plans/Guidance Documents</b>	
<ul style="list-style-type: none"> <li>Comprehensive Plan</li> </ul>	<ul style="list-style-type: none"> <li>Flood Mitigation Assistance (FMA) Plan</li> </ul>
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>Building Code</li> <li>Drainage Ordinance</li> <li>Floodplain Ordinance</li> <li>Landscape Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>Nuisance Ordinance</li> <li>Storm Water Ordinance</li> <li>Tree Trimming Ordinance</li> </ul>
<b>Programs</b>	
Codes Building Site/Design	Included in Code of Ordinances Residential Dwelling Standards
National Flood Insurance Program (NFIP) Participant	CID# 190289
ISO Fire Rating	Cushing class 8, Cushing FD class 9/9
<b>Staff/Department</b>	
Public Works Official	
Emergency Management Coordinator	City Clerk is the emergency manager for the city
NFIP Floodplain Administrator	Authority of the Mayor or Fire Chief

Emergency Response Team	Cushing Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	F Roger Baumann Legion and Auxiliary
Community Organizations	Betterment Club
	Business Club
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water and sewer services	
Impact fees for new development by way of sewer and water connection fees for new homes	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

#### *Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No action taken on this item. Accessible public buildings are known to residents.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A smoke detector program was implemented through the fire department in 2016.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security procedures and equipment upgrades are not currently being considered, as facility repairs are a priority. Not equipment needs were identified for emergency response teams. Training is provided through county, region, and state programs.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Unique conditions of significant snow cover remaining through the first heavy rains of the season prevented routine spring maintenance in 2019. Stormwater channels and drainage ditches were silt-filled at the onset of a very wet year. The city is scheduling a major cleanout projects and establishing scheduled maintenance. Scheduled maintenance is expected to resolve the most frequently occurring issues. Natural open space is prevalent in Cushing and a dedicated program is not necessary.

**Action 2.2.1:** Capital Improvements Program.

*Status:* No direct action was taken on this item, however, an updated comprehensive plan was nearing completion at the time of the planning meeting. CIP plans were likely included in the process.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Cushing is a participant in the NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Trees, including plantings and maintenance are included in the city's Tree Ordinance. Council acts in lieu of a Tree Board. A formal education program regarding tree planting and tree types is not in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Building Codes and site design standards are in place within the City Code, though subdivision regulations are necessary at this time. Floodplain regulations are in effect.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Burning restrictions are based on weather conditions.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Communications are conducted through periodic newsletters, local postings, and Facebook. Scheduled awareness information is not in place but may be considered.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow removal and related snow routes are not a significant concern. Current process is effective.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Restrooms at park are suitable for refuge, though not designated for tornado. Implementation of tornado shelter is not a practical consideration.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communications are established. Further collaboration with county offices will be implemented during and after emergencies. Weather radios are not known to be in place. With city staff and residents relying on technology and text-based alert systems, weather radios are presumed to be unnecessary. A tornado siren is in place and sufficiently meets the needs of the community.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

At the time the planning meeting, City Hall was assessing options to implement a roofing project. Snow load, heavy rain, and winds escalated deterioration. Major investment on equipment and security measures will not be implemented until the roof and other necessary repairs are implemented. Cushing does have floodplain within city limits, however most affected land is designated for agriculture. Only one event for Cushing is recorded in the NOAA

Storm Event Database – Thunderstorm Wind. Power outages are a concern as they can occur due to many types of weather events. Flood can be problematic but has not been of huge concern. Drought and extreme heat were included in discussion of concerns.

Runoff from the bridge to the road has potential to cause washout and stabilization issues.

#### *Priority Hazards*

- Severe Winter Storm
- Fire
- Tornado/Windstorm

#### *e. Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for Cushing are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 5. Danbury

### *a. Profile*

The city of Danbury is located in the southeastern corner of Woodbury County. State Highway 175 runs diagonally through the southeastern portion of the city. Maple River is located south and east of city limits, and several smaller streams are present to the north and west. More information can be found on the Danbury website.

#### *City Governance & Community Supports*

Danbury is governed by a five (5)-person elected City Council and a Mayor. Offices in addition to Mayor and Council include City Clerk/Treasurer and City Maintenance. The City contracts with the County for law enforcement. Danbury has a volunteer fire department, which is supported by surrounding communities. Danbury contracts with Danbury Ambulance Service for emergency response.

Portions of Danbury are located within the floodplain (Zone A); however, the city is not a member of the NFIP program. The Municipal Code of Ordinances is up to date. The Comprehensive Plan is in the process of being updated.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Danbury was 348. American Community Survey (ACS) data estimates the 2017 population at 382, a slight increase. According to the 2013-2017 ACS 5-year estimates, median household income is \$47,500, which is slightly lower than the County’s median income at \$51,350. The percent of the population that is below the poverty level is slightly higher than Woodbury County, at 15.2% and 14% respectively.

Danbury has a significant portion of its population over the age of 65 at 29.1%. This is approximately double that of Woodbury County. FEMA identifies this age group as a vulnerable population.

<b>Community Characteristics</b>	
Population (2010)	348
Population (2017)	382
Total Households	172
Median Household Income	\$47,500
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	18	4.7%	7.3%	6.3%
65 years and older	111	29.1%	14.3%	16.0%
Below the poverty level	58	15.2%	14.0%	12.0%
Living with a disability	57	14.9%	12.4%	11.6%

Total housing units in Danbury is 192. Of those, 172 units are occupied resulting in a 10.4% vacancy rate. Danbury has an aging housing stock with only eight new structures since 2000. Nearly two-thirds of the homes in Danbury are 50 years or older.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	192	
Occupied	172	89.6%
Vacant	20	10.4%
Mobile Homes	0	0.0%



<b>Age of Residential Structure</b>		
Built 2000 or later	8	4.2%
Built 1970 – 1999	58	30.2%
Build 1969 or earlier	126	65.6%

More demographic and community data can be found on the U.S. Census webpage for Danbury.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	2,687,611
Personal Property	\$	785,500
EDP-Hardware	\$	5,000
Misc Property Sched	\$	<u>128,495</u>
<b>Total</b>	<b>\$</b>	<b><u>3,606,606</u></b>

*Leading Employers*

While not hosting a large number of employees, the following businesses operate and have established a necessary presence in Danbury.

Barry Motors	GFG
Colbert's Market	Nutrien Solutions
Danbury Catholic Schools	Sexton Oil

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall	207 1st St,
Danbury Fire Department	201 Main St
Danbury Ambulance Service	201 Main St
Library	215 Main St

Storage Facility	
Water Tower	
Shop/Water Treatment Plant	108 2nd St
Well House	
Water Treatment Tank	
Lagoon	
Lift Station	L37
City Ballpark	West edge of 3rd St
City Park	W 2nd & 4th Sts
Dana Apartment Bldg	303 Main St
Health & Recreation Facility	206 East St

*Community Supports, Vulnerable Populations, &/or Gathering Locations*

St. Mary’s Catholic Church and School	604 Peach Street
Danbury United Methodist Church	200 Liston St
Schrank’s Bar & Grill	117 Main St

*b. Participation*

A planning meeting was held via conference call on May 30, 2019. Those in attendance are as shown.

Brooke Kafton	City Clerk
Michael Buth	Mayor
Nick Kafton	Maintenance Sup
Lynn	Resident

*c. Community Capabilities*

In addition to county, region, and state resources available, following are local supports contributing to Danbury's ability to remain resilient.

<b><i>Plans/Guidance Documents</i></b>	
Comprehensive Plan	
<b><i>Policies/Ordinance</i></b>	
• Drainage Ordinance	• Subdivision Ordinance

<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
ISO Fire Rating	Danbury class 7; Danbury FD class 9/9
Property Acquisition	
<b>Staff/Department</b>	
Public Works Official	
Emergency Management Coordinator	City Clerk @ local level
Emergency Response Team	Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	Carlson-Frum American Legion
Community Organizations	Danbury Community Club
<b>Local Funding Availabilities and Authorities</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Fees for water and sewer services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No formal action has been taken. Several public buildings are available as shelter from direct heat and other hazards. The Community Hall and City Hall are refuge locations

when open. A new shelter house is in place at the park. Two school buildings have designated tornado refuge corridors, but there is not a tornado-rated shelter in place.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No local program in place. Interest in participating if available at county or region level.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Equipment to ensure operation of critical facilities has been added, however, there are still some needs. The city has barricades for road closures. A portable generator has been designated for the lift station and a permanent one for the water plant. An additional portable generator is necessary. At the time of the planning meeting, Danbury was pursuing funding for a new warning siren. Training is provided for responders through several resources. Also in place for response teams are a boom truck, plow truck, ATV, and snowmobile.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Flooding risks at present are specific to runoff-caused damages, and those primarily affecting roads. Structures have not been compromised. City Maintenance is actively pursuing drainage improvement options. Preservation of natural space has not been a priority concern.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Projects are determined case-by-case. A more structured process is defined within the comp plan.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Tree Planting Plan has not been implemented and is not being considered. Maintenance is addressed in the City Code regarding right-of-way responsibility. Council addresses issues as needed in lieu of a tree board. No formal education programs are in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are not in place, nor needed at present. The city defers to the state building standards by reference. A floodplain map is on file but may be affected by current updating process in progress by the Iowa DNR.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* No action taken on this item.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Facebook page and city website are already in place for community communications.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A snow emergency plan establishes parking restrictions November 1 through April 1. Plow route is consistent but not formal.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communications networks are already established. In addition to those mentioned, flyers may be distributed as appropriate. A bullhorn is available, and has been used for immediate notifications. The warning siren located at the center of town needs to be replaced.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Radio communications improvements have been implemented at the County level. Cable television interrupt and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Flooding as occurred in 2019 resulted in notable road damages caused by runoff. Danbury city limits do contain some floodplain, though most affected properties are already designated for agriculture. Three incidents in the NOAA Storm Event Database were noted for Danbury in the

past five years – Thunderstorm Wind and Hail. Sinkholes are causing some concern but no immediate impact to date.

#### *Priority Hazards*

- Tornado/Windstorm
- Thunderstorm w/Hail & Lightning
- Severe Winter Storm

#### *e. Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for Danbury are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## **6. Hornick**

### *a. Profile*

The city of Hornick is situated near the southern-most border of Woodbury County, just west of center. Most of the city lies north of Highway 141, with about 20% of the total area extending south of the highway.

#### *City Governance & Community Supports*

Hornick is governed by a five (5)-person elected council and the Mayor. Offices in addition to Mayor and Council include City Clerk and Public Works. The Hornick Volunteer Fire Department is independent of the City but does receive some funding from Hornick. City staff designates the Legion Hall and the United Methodist Church as significant support entities to community well-being. These and additional community supports are specified in the discussion of Community Capabilities. The City contracts with the County for law enforcement and maintains a 28E agreement with regional emergency response providers.

The City of Hornick is a member of the NFIP program, though the majority of residents are known to be inactive under flood insurance. The Municipal Code of Ordinances was last updated in 2013. A Comprehensive Plan was adopted February 11, 2019.

*Demographics, Housing, & Economics*

Based on 2010 census data, the population of Hornick is 225. Housing available in 2010 was 113, with 102 occupied. American Community Survey (ACS) data estimates show the 2018 at 215, significantly lower than the 2017 estimate of 276. Local estimation as provided by the City is consistent with 2010 data. The 2013-2017 ACS 5-year estimates indicate median household income to be \$58,250 with 3.3% of the population falling below poverty level.

With minimal new construction, about 68% of Hornick’s housing stock is about 50 or more years old. ACS 2018 estimates show housing availability to be 109 units with two unoccupied and only two new construction homes built since 2000. Local permits as issued in recent years were primarily for accessory buildings and improvements to existing structures.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

*2019 Valuation of City Assets*

Building	\$	1,248,148
Personal Property	\$	254,828
Property in the Open	\$	<u>448,945</u>
<b>Total</b>	<b>\$</b>	<b><u>1,951,921</u></b>

*Leading Employers*

While not hosting a large number of employees, the following businesses operate and have established a necessary presence in Hornick.

New Cooperative
3-Speed Repairs
Chance "R" Bar



*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall; Fire Dept Garage	400 Main St
Community Center	419 Main St
Water treatment Facility	420 Main St
Water Tower	Lots 16-18, Block 7
Museum	201 Main St
City Park	405 4 <sup>th</sup> St, Ste 1
Library	510 Main St
Lift Station	208 4 <sup>th</sup> St
Garage	406 5 <sup>th</sup> St

Community Supports, Vulnerable Populations, &/or Gathering Locations

Legion Hall	306 Main St
United Methodist Church	411 5 <sup>th</sup> St

Due to events occurring spring of 2019, the City of Hornick was put in the position of completing an in-the-moment assessment of its assets as a whole. Private businesses and organizations play an essential role in the City's recovery efforts and communication network, and are therefore included in this itemizing of essential or critical facilities. The list is not exhaustive. Additional community churches and individuals, as well as those in nearby communities, work together to ensure communication and support in times of crisis. Key players are identified, however, some entities are not specifically included in the interest of minimizing excess content.

*b. Participation*

In preparation of this Hazard Mitigation Plan, including updates from the 2014 Plan, project coordinators met with representatives from the City of Hornick on June 7, 2019. In attendance were Mayor Scott Mitchell and City Clerk Candi Gress. City staff and key figures in the community provided feedback via phone and email exchanges. Indirect participants include Cliff Teel, City Waterworks and Fire Chief Curt Crichton. Due to a major citywide flood event in March of 2019, a large number of Town Hall and special Council meetings were held, both in the City of Hornick and in the nearby community of Sloan. The City of Sloan offered refuge

assistance and access to meeting venues during the full evacuation of Hornick (implemented March 2019). Some content of incident-specific meetings and discussion have been incorporated into the hazard analysis, risk assessment, capabilities assessment, actions, and strategies for the City of Hornick. Opportunity of jurisdiction and countywide public input was provided at the Woodbury County Fair. Hosted by the County Sheriff’s Office and Emergency Management Agency, a display was in place inviting public comment regarding natural Disasters, including “Other Hazards” and respondents relative level of concern for each indicated. Space was provided inviting written comment on impact of disasters outside of one’s control and related project ideas that may benefit the community.

Due to the unique characteristics in weather events of spring 2019, {Public Input} opportunities were prevalent as provided through Town Hall meetings in addition to special and scheduled Council Meetings. Comments at these particular meetings have been considered by City staff and are included as appropriate in the Plan.

c. *Community Capabilities*

*Capabilities*

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance</li> <li>• Restricted Residence District</li> <li>• Storm Water Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Subdivision Regulation</li> </ul>
<b>Programs</b>	
NFIP	CID #190291
ISO Fire Rating	Hornick, Class 8; Hornick FD, Class 8/9
<b>Staff/Department</b>	
Engineer	County representation; Contracted consult as needed
Public Works Official	Public Works Superintendent
Emergency Management Coordinator	City Clerk @ local level
Emergency Response Team	Hornick Fire and Rescue

<b>Non-Governmental Organizations</b>	
Veterans Groups	Hindman-Steele American Legion and Auxiliary
	Sons of the Legion
Community Organizations	Library Group
<b>Local Funding Availabilities &amp; Authorities</b>	
Community Development Block Grants	
Capital Improvements funding	
Authority to levy taxes for a specified purpose	
Fees for water, sewer	
Incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• private activities</li> <li>• special tax bonds</li> </ul>
Withhold spending in hazard prone areas is in place but unlikely to be used.	

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is in place. Local refuge locations are known to include City Hall and the Community Center when open, and United Methodist Church

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* The Hornick Volunteer Fire Department, through funding provided by the American Red Cross, implemented a free smoke detector program open to all Hornick residents.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community

*Status:* The City has installed a secured entry key fob system at City Hall to address security concerns. In response to updating procedures at critical facilities, the City has implemented flood barricade measures and installed two (2) backup generators, one of which is portable for use at varying facilities as needed.

**Action 2.1.3:** Improve drainage patterns in and around the community

*Status:* Ditches are now on a scheduled maintenance plan instead of “as needed”.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Hornick is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** *Tree Board.*

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*Note: Several references to trees, tree maintenance, tree plantings, tree education, and tree information are made in the 2014 Plan. In an effort to reduce redundancy, the subject of trees and related interests are all addressed here.*

*Status:* The City has included in its Code of Ordinances measures addressing responsibility of tree maintenance as it applies to trees located in the public right-of-way, and as lack of maintenance (pertaining to damaged or diseased trees) or specific tree types may contribute to nuisances. Obstruction due to fallen trees in the event of severe weather is reported during post-event assessment and handled on a case-by-case basis. Further review is needed for consideration of a formal tree maintenance, removal, and replanting ordinance or plan as may be deemed necessary upon potential infestation of the Emerald Ash Borer Beetle, or like pestilence or disease. Implementation of formal education programs is currently hindered by lack of resources and will not likely be implemented in the near future. In the event of a damaged or diseased tree, the Council makes the decision to pursue removal.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

*Status:* The Municipal Code of the City of Hornick includes language addressing Subdivision Regulations. Regulations are reviewed periodically.

**Action 2.3.2:** Evaluate and Improve Building Standards

*Status:* Building Standards have not been adopted by reference or by inclusion in the current Municipal code. However, adoption of the local Floodplain Ordinance does set forth some building standards as they apply to development within the established floodplain.

**Action 2.3.3:** Continue Floodplain Regulations.

*Status:* The City has adopted a floodplain ordinance. It will remain in review in light of flooding in 2019 and recovery efforts resulting from that event.

**Action 2.3.4:** Preserve Natural Open Spaces.

*Status:* While not formally in place as a conservation or preservation mechanism, the City does have public space designated as park land or otherwise intentionally undeveloped or minimally developed due to likelihood of flooding. In cases where structures have been built on such property, those structures are not subject to damages in the event of flooding.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* No action taken on this item.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*Note: Several action items in the 21014 Plan addressed communication in a number of capacities. As communication efforts in all situations are correlated, this Plan addresses the multi-faceted actions taken to improve local communication efforts in one combined summary.*

*Status:* The City has established its website as primary source of communication in the event of a disaster. Secondary lines of reliable communication are through local news networks and the County Sheriff page. When time allows, the City will reach out to residents door-to-door to inform of emergency condition and/or prevention measures as applicable to the situation. Further means of improving communications are included in the listing of new projects.

The City and Volunteer Fire Department routinely participate in available training, which includes Weather Spotter training, allowing for more input from residents rather than complete reliance on a regional radar system. The City does have a tornado warning siren and coordinates with the County Communication Center to test and initiate warnings as appropriate.

Weather radios are not onsite at City buildings, however City staff does have direct radio connection with the Fire Department and are able to receive notifications through that system. The warning sirens located near City Hall and its range sufficiently serves residents within city limits. The City has reviewed available supplements to community-wide communication efforts and related projects are included in current actions and strategies.

**Action 4.1.1:** Additional equipment for emergency response.

*Status:* With mutual benefit to the above noted action item 2.1.1., installation of a permanent generator and acquisition of a portable generator for use at varying critical facilities further address continued function of emergency response efforts in the event of a disaster.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

*Status:* The City has a developed plan in place addressing snow removal and accessibility on high frequency routes.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The City has the following recognized as shelters in the community: For tornado – United Methodist Church basement; for extreme temperatures – City Hall, the Legion Hall, United Methodist Church; as communication center during a disaster – the Legion Hall. In the event of evacuation, the City will coordinate with nearby communities to establish a main point of contact and that location may vary depending on the event and the scope of the event's effects. Woodbury Central Schools provide space to serve as a refuge location for displaced residents in Hornick and nearby communities. Current projects may include implementation of supports to maintain effectiveness of these designated shelters in the event of a power outage or other restrictive conditions such as heavy snowfall.

#### d. *Risk Assessment*

##### *Contributing Factors*

The weather events of 2019, as well as those conditions as accumulated through the preceding fall and winter, shed light on community vulnerabilities that previously registered as little or no concern. At the time of developing this plan, the City has determined their priority hazard to be flooding due to the compromised integrity of the dike bordering the city. Flash flooding is of immediate concern but river flooding and resulting high ground water tables further complicate effects of flash flood conditions, extending the period of increased surface water.

Levels of concern of most hazards are consistent with those of the region.

##### *Priority Hazards*

The City recognized these hazards are being of primary concern to residents and potential impact on City operations:

- Flood – Flash and River
- Tornado
- Grass and Wildland Fire

#### e. *Mitigation Actions & Strategies*

Extreme flooding as occurred in spring of 2019 called to attention the need for specified flood prevention, including but not limited to an enhanced berm. Details as available for needed

and/or planned projects for the City of Hornick are included in the Region listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 7. Lawton

### a. *Profile*

The city of Lawton is centrally located in the northwestern quarter of Woodbury County. The majority of the City is situated north of U.S. Highway 20, with a small portion including an assisted living facility located south of the highway. Elliott Creek is located in the western portion of the city and runs north to south. More information can be found on the City of Lawton website.

#### *City Governance & Community Supports*

Lawton is governed by a Mayor and City Council who are elected by city residents. City Council is composed of five (5) members. Offices in addition to the Mayor and Council include City Clerk and Public Works. The Lawton Community Fire Department is staffed by volunteers and provides fire suppression and rescue services to Banner Township and Concord Township in addition to the City. Lawton has its own ambulance service, the Provisional Paramedic Service, which includes 6 ambulances and serves the surrounding 72 square miles.

#### *Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Lawton was 908. American Community Survey (ASC) data estimates show the 2017 population at 935, a slight increase but generally indicative of a stable population. According to the 2013-2017 ACS 5-year estimate, median household income is \$70,625, which is significantly higher than Woodbury County's median income. Additionally, the City has only 2% of its population below the poverty level, compared to 14% for the County.

Other vulnerable populations are generally represented at the same levels as Woodbury County or the state of Iowa.

### *Community Characteristics*



Population (2010)	908
Population (2017)	935
Total Households	353
Median Household Income	\$70,625
Median Household Income – Woodbury County	\$51,350

<i>Vulnerable Populations</i>	<i>Count</i>	<i>Percent</i>	<i>Woodbury</i>	<i>Iowa</i>
5 years and younger	55	5.9%	7.3%	6.3%
65 years and older	164	17.5%	14.3%	16.0%
Below the poverty level	19	2.0%	14.0%	12.0%
Living with a disability	116	12.4%	12.4%	11.6%

Total housing units for Lawton is 384. Of those, 354 units are occupied resulting in an 8.1% vacancy rate. Lawton has a more balanced distribution of residential structure ages compared to many nearby communities. Over a quarter of the housing stock was built after 2000.

<i>Housing Characteristics</i>	<i>Count</i>	<i>Percent</i>
Total Housing Units	384	
Occupied	354	91.9%
Vacant	31	8.1%
Mobile Homes	0	0.0%
<i>Age of Residential Structure</i>		
Built 2000 or later	102	26.6%
Built 1970 – 1999	128	33.3%
Build 1969 or earlier	154	40.1%

More demographic and community data can be found on the U.S. Census webpage for Lawton.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	3,647,091
Personal Property	\$	53,973
EDP - Hardware	\$	92,850
Misc Property Sched	\$	322,753
Misc Property Unsched	\$	<u>206,111</u>
<b>Total</b>	<b>\$</b>	<b><u>4,322,778</u></b>

*Leading Employers*

Leading employers include the following

Lawton-Bronson Community Schools
Mid-West Equipment
Lawton Senior Living
Pronto Market
Western Iowa Telecom

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

Garage	206 W Main
City Hall / Senior Center	300 Cedar St
Fire Station	104 W Maple
Pump House	300 W Main
City Park	111-113 Terra Way
Water Tower	
Park, Gazebo	SE Corner - Cedar & Maple
Ballpark	1592 Eastland Ave
Water Treatment Facility	Ash St
Well Heads; Related	
Sewer Lift Station	301 W Main
Emergency Siren	Maple St

Community Supports, Vulnerable Populations, &/or Gathering Locations

Lawton-Bronson Junior High School	100 Tara Way
Lawton-Bronson High School	

Bethel Lutheran Church	322 Pine St
The Friendship Center	233 Cedar St
Community Presbyterian Church	411 E Birch St
The Lawton Exchange	311 Cedar St
Security National Bank	315 Cedar St
Killer B's BBQ	508 E Oak St

*b. Participation*

A planning meeting was held on May 8, 2019 at City Hall in Lawton with Mayor Dale Erickson, City Clerk Carla Eidenshink, Fire Chief Chris Ameen, and Public Works Director Justin Dunnington in attendance.

*c. Community Capabilities*

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> </ul>
Some provisions for Stormwater included in the Code of Ordinances	
Some provisions for Debris Management included in the Codes of Ordinances	
<b>Programs</b>	
Some provisions for Drainage included in the Codes of Ordinances	
National Flood Insurance Program (NFIP) Participant	CID #190292
ISO Fire Rating	Class 5/5x
Property Acquisition	
<b>Staff/Department</b>	
Public Works Official	Water Superintendent
Emergency Management Coordinator	City Clerk @ local level
Emergency Response Team	Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Post 718

<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Fees for water and sewer services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No formal list is maintained. Designated refuge locations are not in place. Public building available when open.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* Program has been in place in the past. No detectors available at this time. City would participate again if funded.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Generators are in place each lift station and at the water plant. One is still needed for the Fire Department. The FD has a new ATV and a small generator for on-site response. No additional needs are known. Equipment replacement is ongoing and funding sources are continuously sought.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No action taken, none planned, to implement property acquisition program. Drainage improvements planned for summer of 2019. Storm sewer project underway.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Annual budget discussion includes review of 5-year plan. A formal CIP has not been implemented.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Lawton does participate in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Shade is primary consideration in planting trees; no formal planting plan is in place. Maintenance is guided through language in the City Code, particularly regarding trees in the

parking (maintenance and type restrictions). Council determines matters pertaining to trees in lieu of a tree board. No education programs are in place through the city.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Some provision for building code is included in the City Code. Standard Subdivision and Floodplain Regulations are in place.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* No action taken on this item.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* No specific actions have been implemented. However, safety info is sometimes included in local newsletter.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow routes are dependent on conditions. Utility checks and damage assessments are conducted during snow removal process.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The community center has been identified as a potential location for a tornado shelter. Installation or meeting of specs may only be implemented if a new center is constructed.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communication networks are already established. The city webpage, area TV stations, the fire department's public address system, and an email alert-subscription are all in place. The city has one warning siren, which serves the city sufficiently. Weather radios are in place at the schools, city hall, and FD.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

In the most recent 5-year period available, Lawton was reported to have experienced three storm events as recorded in the NOAA database – Thunderstorm wind, Hail, Flood. Some floodplain does surround the city, however, most affected property is already designated for agriculture use. Discussion included concern regarding Transportation Incident.

##### *Priority Hazards*

- Tornado
- Severe Winter Storm
- Grass and Wildland Fire

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

8. Merville

a. *Profile*

The city of Merville is centrally located in the northern half of Woodbury County. The majority of the City is situated north of U.S. Highway 20, with a small portion located south of the highway. Several streams are located to the west of the City including McElhaney Creek, West Mud Creek, Mud Creek, and West Fork Little Sioux River. Only McElhaney Creek passes through city limits. More information can be found at the City of Merville website.

*City Governance & Community Supports*

Merville is governed by a Mayor and City Council who are elected by city residents. A Mayor Pro Tem is appointed by the mayor and may vote as a member of the Council. Five (5) additional members serve on Council. Offices in addition to Mayor and Council include City Clerk, Public Works, Police, Fire and Rescue, and Ambulance Services.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Merville was 1,618. American Community Survey (ASC) data estimates show the 2017 population at 1,682, a slight increase but generally indicative of a stable population. According to the 2013-2017 ACS 5-year estimate, the median household income is \$63,636, which is significantly higher than Woodbury County's median income. Additionally, the City has 8.5% of its population below the poverty level, compared to 14% for the County.

In all categories, Merville has proportionally smaller vulnerable populations when compared to Woodbury County and the state of Iowa. However, its position as host for Woodbury Central Schools and major events such as the County Fair and an annual high school rodeo increase instance of vulnerability.



<b>Community Characteristics</b>	
Population (2010)	1,618
Population (2017)	1,682
Total Households	666
Median Household Income	\$63,636
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	104	6.2%	7.3%	6.3%
65 years and older	232	13.8%	14.3%	16.0%
Below the poverty level	143	8.5%	14.0%	12.0%
Living with a disability	133	7.9%	12.4%	11.6%

Total housing units in Merville is 707, of those, 666 units are occupied resulting in a 5.8% vacancy rate. According to the ACS, only 7.4% of Merville’s housing stock was built after 2000. Over half of all residential structures are 50 years or older.

Local record shows an expansion in housing units, mostly single-family dwellings. Ridge Development alone has 26 new homes.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total housing units	707	
Occupied units	666	94.2%
Vacant units	41	5.8%
Mobile Homes	33	4.7%
<b>Age of Residential Structure</b>		
Built 2000 or later	52	7.4%
Built 1970 – 1999	277	39.2%
Build 1969 or earlier	378	53.5%

More demographic and community data can be found on the U.S. Census webpage for Merville.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does

not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$ 7,998,685
Builders Risk	\$ 55,000
Personal Property	\$ 459,212
EDP-Hardware	\$ 5,000
Misc Property Sched	\$ 277,120
Misc Property Unsched	\$ <u>30,200</u>
<b>Total</b>	<b>\$ <u>8,825,217</u></b>

Leading Employers

The largest employer in the City of Merville is the Woodbury Central Schools, which employs approximately 75 people. In addition to education, the manufacturing and retail trade industries employ the next greatest amount of people.

EGR Insurance, Inc.
MFC
Nutrien
Western Iowa Telephone Association
Woodbury Central Community School District

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

City Hall	21 Main St
Police	
Ambulance	24 W Main St
Fire & Rescue	
Lift Station	1 Hwy 140
Fire Station	5 S 1 <sup>st</sup>
Haskell Pool; Park	2 Hwy 140
Community Center	815 Main St

Fire Station #2; Vehicle Storage	19 S 1st
Well House	111 N 3rd St
Siren	
Well House; Well Heads	211 N 4 <sup>th</sup> St
N Lift Station	112 N 2 <sup>nd</sup> St
Lagoon Bldg	2431 160 <sup>th</sup> St
Water Tower & Control Panel	111 Fair St
Pumps	
Midway Park	N 4 <sup>th</sup> St
Ball Fields	221 N 2 <sup>nd</sup> St
Main St Park	Main St
The Ridge Park	845 Park Ridge Pl
Memorial Park	
Veterans Park	

Community Supports, Vulnerable Locations, &/or Gathering Locations

Woodbury County Fairgrounds*	206 Fair St
Woodbury Central High School	408 S 4 <sup>th</sup> St
Woodbury Central Middle School	
Moville Elementary School	
Eastside Acres Campground	811 E Frontage Rd
Midway County Park	State Highway 140
Churches	
• New Hope Church	516 Main St
• Moville United Methodist Church	450 S 1st St
• Trinity Lutheran Church	323 S 4th St
• Immaculate Conception Church	419 Jones St
Family Health Care of Siouxland	410 Main St
Senior Center / American Legion Hall	11 S 2nd St
Mobile Home Park	811 E Frontage Rd

*\*Additional County Facilities as may be located in Moville are itemized in the County Profile.*

b. *Participation*

A planning meeting was held at Movable City Hall on May 9, 2019 with Mayor Jim Fisher, Public Works Superintendent Michael Weaver, and Police Chief Jereme Muller in attendance. Public input opportunities in addition to the online survey were in place in two locations in Movable – the Woodbury County Fair and the Congregate Meal Site. At both venues, a display board and comment cards were available. At the fair, the sheriff's department partnered with County Emergency Management to provide information about natural and other hazards. A brief presentation was given to meal site attendees. Cards were left on-site to extend opportunity. Six comments cards included Movable as represented jurisdiction.

c. *Community Capabilities*

Movable has the following local supports in place in addition to resources as uniformly available through county, region, and state programs.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
Capital Improvement Plan	
Land Use Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Nuisance Ordinance</li> <li>• Subdivision Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
National Flood Insurance Program (NFIP) Participant	CID #190293
ISO Fire Rating	Class 4
	FD Class 8/5 Rural
Planning/Zoning Boards	
<b>Staff/Department</b>	
Building Code Official	Independently contracted
Building Inspector	Independently contracted
Public Works Official	Public Works Directors
NFIP Floodplain Administrator	City Clerk
Emergency Response Team	Fire and Rescue

<b>Local Funding Availabilities &amp; Authorities</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Fees for water and sewer services	
Impact fees for new development	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A formal list is not in place. Preparedness reminders with refuge information may be posted on the community billboard and incorporated into the quarterly newsletter.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A program is in place through the fire department.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Equipment was added to ensure function during power outages – generators are in place at City Hall and the south lift station. A portable generator is available for the north lift

station and pump house. The Fire Department has portable generators for use on scene. Response teams need more radios for inter- and inner department communications. A 4" pump is a relatively new addition to equipment, and a UTV is part of the inventory. Housing the county roads office, some county supplies are accessible if needed. Support by way of EMT Certification Funds would benefit response teams. Training is readily available, however time available to complete and maintain certification training is in short supply.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No action has been taken to acquire high-risk to flooding properties. Several projects have been completed to address drainage. Drainage patterns have been changed to allow protections of more areas. Ditch work was done to reduce the floodplain. Retention ponds are in place at the Golf Course. Residential property developments have had improvements implemented as well.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

Comprehensive Plan and the CIP were undergoing updates at the time of the planning meeting. They provide a cross-referenced guide to projects and coordinated development.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Menville is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* A formal tree planting plan is not in place. Tree maintenance and nuisance-based prohibitions are addressed as they pertain to public right-of-way in the City Code. Council responds to tree-related issues in lieu of a tree board.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulation are in place in the City Code. Recently added ordinances reference building code and property maintenance. Floodplain regulations are ongoing.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open Burn restrictions are in place. Two separate one-week periods are permitted and scheduled to allow burning of yard waste.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Merville actively promotes preparedness and awareness to vulnerabilities through its billboard and newsletter.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A priority route is established, though not written. Assessment of risks and damages is part of the routine. Crews split out to assess areas after wind/rain storms as well.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* An EF4 Tornado Shelter is in place at the Woodbury County Fairgrounds. An "unlock" plan is in place allowing use of fairgrounds shelter by trailer court residents as needed.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A well-established means of communication is already in place. Those efforts will be reinforced by coordination with county emergency management and sheriff's departments as applicable. The city has one warning siren. It is 10-15 years old and experienced a recent malfunction. Two are needed to supplement the existing– one at city center and one at the water tower. Need is being assessed to determine if additional are needed at far north, southeast corner and/or Ridge Park.

A weather radio is in place at the fire department. Handheld radio network includes a city channel to allow intercommunications.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.



d. *Risk Assessment*

*Contributing Factors*

In the five most recent years of available information, Merville is reported to have had four storm events on record in the NOAA Database. Rain, Wind, Hail, and flood prompted those reports. Public comment as provided indicated the highest level of concern for Tornado/Windstorm, followed by Thunderstorm and Severe Winter Storm. Flooding and extreme heat were noted with significance.

Flooding in 2019 was significant with the main intersection at 1<sup>st</sup> St and Hwy 20 under water with limited alternate routes available. Traffic incidents are a major concern as motorists routinely pass through the four-way controlled intersection without stopping, or even slowing down.

*Priority Hazards*

- Tornado/Windstorm (with wind being more prevalent)
- Flooding
- Severe Winter Storm and Thunderstorm w/Hail & Lightning (of equal consideration)

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

**9. Oto**

a. *Profile*

The city of Oto is centrally located in the southeastern quarter of Woodbury County. State Highway 31 and County Highway D54 intersect in Oto. The city is situated west of the Little Sioux River. To the west is Oak Ridge Conservation Area, and to the north is Curtin Timber Public Wildlife Area.

*City Governance & Community Supports*

Oto is governed by a Mayor and City Council. The Council is composed of three (3) voting members. In addition to these offices, Oto is served by the following departments: Clerk/Treasurer and Maintenance. The City contracts with Woodbury County for law enforcement services. Oto is served by independently operated, volunteer emergency response teams -- Oto Ambulance and Oto Fire Department.

Although portions of the City are located within a floodplain (Zone A), Oto is not a member of the NFIP program. Both the Municipal Code of Ordinances and the Comprehensive Plan are in the process of being updated.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Oto was 108. American Community Survey (ACS) data estimates show the 2017 population declined slightly to 94. According to the 2013-2017 ACS 5-year estimate, median household income is \$35,625, which is significantly less than Woodbury County’s median income. At 33%, the City also has one of the highest percent of its population under the poverty level in Woodbury County. It is more than double the County’s percent, which is 14%.

Oto is composed of a relatively high number of individuals living with a disability. Nearly a quarter of the population falls into this category, approximately double County and State percentages. FEMA identifies this as a vulnerable population.

<b>Community Characteristics</b>	
Population (2010)	108
Population (2017)	94
Total Households	35
Median Household Income	\$35,625
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	2	2.1%	7.3%	6.3%
65 years and older	15	16.0%	14.3%	16.0%

Below the poverty level	31	33.0%	14.0%	12.0%
Living with a disability	23	24.5%	12.4%	11.6%

With minimal new construction, approximately 74% of Oto’s housing stock is 50 or more years old. According to ACS data, only one house has been built in the 21<sup>st</sup> century. The City also has a relatively high vacancy rate at 30%; 15 of the 50 total housing units are not occupied.

<i>Housing Characteristics</i>	<i>Count</i>	<i>Percent</i>
Total Housing Units	50	
Occupied	35	70.0%
Vacant	15	30.0%
Mobile Homes	3	6.0%
<i>Age of Residential Structure</i>		
Built 2000 or later	1	2.0%
Built 1970 – 1999	12	24.0%
Build 1969 or earlier	37	74.0%

More information regarding demographics can be found on the U.S. Census webpage for Oto.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	21,432	ACV
		28,717	RC
Personal Property	\$	44,950	RC
Property in the Open	\$	<u>281,220</u>	RC
<b>Total</b>	<b>\$</b>	<b><u>376,319</u></b>	

*Leading Employers*

While not hosting a large number of employees, the following businesses operate and have established a necessary presence in Oto.

- M&M's Bar & Grill
- Lefty Lee's

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Hall	215 1st Ave
Ambulance Service	27 Washington
Sewage Lift Station	242 Water St
Fire Department	
Pump/Well #3	300 3rd Ave
Town Mtnc Bldg	Washington St
Water Tower	Royal St
Pump House #2	110 2nd Ave

*b. Participation*

An on-site meeting was held at Oto City Hall on June 7, 2019, with City Clerk Deb Reynolds in attendance. Additional input was collected through submission of a comment card at the Woodbury County Fair Hazard Mitigation Public Input display.

*c. Community Capabilities*

In addition to state, region, and county programs, the City of Oto has the following identified as locally available resources.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
Nuisance Ordinance	Trees Ordinance
Building and Land Use Regulations	
<b>Programs</b>	
National Flood Insurance Program (NFIP) Participant	No, CID #190294
ISO Fire Rating (updated class not provided)	Oto Class 9; Oto FD Class 9/10
<b>Staff/Department</b>	
Public Works Official	
Emergency Response Teams (Independent of City)	Ambulance

	Fire Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	Henry V McKenna American Legion
<b>Local Funding Availabilities &amp; Authorities</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Fees for water, sewer, gas, or electric services	
Assess impact fees for new development	
Incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Withhold spending in hazard prone areas	

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* No action taken on this item. May implement reminders rather than making list permanently available.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No action taken.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Reviews of procedure are ongoing. No major changes have been made. The Fire Department is actively seeking funding for a new or renovated facility and numerous equipment updates and replacements.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Major improvements are not in the works and acquisition program is not realistic. A large-scale ditch clearing project was implemented to improve drainage and maintenance standards should be considered for implementation. Open natural space is prevalent in and around Oto.

**Action 2.2.1:** Capital Improvements Program.

*Status:* A formal process is addressed in the Comp Plan but has not been implemented at the time of the planning meeting. Projects are assessed on a case-by-case basis.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* A CID has been issued to Oto but the city is NOT a participant in the program.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The city has in place a tree ordinance that addresses maintenance and responsibility for trees within the right-of-way. No planting plan is defined; a tree board is not in place. Education programs are not in place. Some tree species are restricted as applicable under nuisances.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are not included in the City Code. Building and Land Use regulations set parameters based on State Building Standards.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* A burn ban is not in place. County-issued bans are communicated with residents.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* The city has some standardized communication networks in place. Flyers or newsletters may be delivered door-to-door as needed.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow removal is an established routine, during which damages are assessed and reported.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No action taken on this item. Refuge available at City Hall.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Community is reliant on text, radio, and television alerts at this time. Community warning siren is not in service due to a lightning strike. Weather radios may have been distributed but are not routinely in use.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Electrical storms have wreaked havoc on Oto. The warning siren was taken out by a lightning strike and the pump station suffered from a power surge. Flood damages have mostly been washout-related. No reports in the NOAA Storm Database in recent records indicate Oto as origin point. One public comment submission was collected identifying Oto as represented jurisdiction. Comments referenced a high level of concern for many hazards addressed in this plan. Earthquake does not pose concern for any participants.

##### *Priority Hazards*

- Tornado/Windstorm



- Severe Winter Storm
- Thunderstorm w/Hail & Lightning

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 10. Pierson

a. *Profile*

The city of Pierson is situated in the northeast quarter of the Woodbury County, near the northern border. County Highways D12 and L25 intersect at the northeastern corner of the city. Several small streams meander through city limits. More information can be found on the City of Pierson website.

*City Governance & Community Supports*

Pierson is governed by a five (5) person elected City Council and the Mayor. Offices in addition to the Mayor and Council include City Clerk and Public Works. Fire and rescue services are provided by the Pierson Fire Department, which is staffed by volunteers. This department provides fire response services to surrounding communities. Pierson contracts with Woodbury County for police protection services.

The city is a member of the NFIP program. The City does have a limited Municipal Code of Ordinances. A Comprehensive Plan is in the process of being written.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Pierson was 366. American Community Survey (ASC) data estimates show the 2017 population at 397, indicating mild growth. According to the 2013-2017 ACS 5-year estimate, the median household income is \$38,409, which is significantly less than Woodbury County's median income. The percent of Pierson's population that is below the poverty level is generally in line with the County and State averages.

<b>Community Characteristics</b>	
Population (2010)	366
Population (2017)	397
Total Households	164
Median Household Income	\$38,409
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	30	7.6%	7.3%	6.3%
65 years and older	63	15.9%	14.3%	16.0%
Below the poverty level	51	12.8%	14.0%	12.0%
Living with a disability	61	15.4%	12.4%	11.6%

The total housing units in Pierson is 184. Of those, 164 units are occupied resulting in a 10.9% vacancy rate. An aging housing stock is a common characteristic in Woodbury County, and Pierson is a strong example of this. A huge proportion of Pierson’s housing stock is 50 or more years old, at 88.6%. Furthermore, According to the ACS, no new houses have been built since 2000.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	184	
Occupied	164	89.1%
Vacant	20	10.9%
Mobile Homes	10	5.4%
<b>Age of Residential Structure</b>		
Built 2000 or later	0	0.0%
Built 1970 – 1999	21	11.4%
Build 1969 or earlier	163	88.6%

More demographic and community data can be found on the U.S. Census webpage for Pierson.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute

to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$ 1,683,582
Personal Property	\$ 83,933
Property in the Open	\$ <u>484,286</u>
<b>Total</b>	<b>\$ <u>2,251,801</u></b>

Leading Employers

While not hosting a large number of employers, the following businesses operate and have established a necessary presence in Pierson.

New Co-op
Culligan Water
United Bank of Iowa

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

City Hall/Library	201 Main St
Community Center	514 2nd St
Fire Station	
Water Tower; Pump House	300 Main St
City Park	Main St
Tennis Courts/Sand Volleyball	208 Maple St
Maintenance Bldg	601 Front St
Pump house & Related	290 Maple
Utility Bldg	
Pump House; Control Panel	Lenox Ave
Sewage Treatment Plant	Minnesota Ave
Ballpark	210 Maple St
Cemetery	

Community Supports, Vulnerable populations, &/or Gathering Locations

US Post Office
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Pierson Elementary & Middle School (4-8)
Pierson United Methodist Church
Gas Lantern Restaurant
Thonny's Bar and Grill

*b. Participation*

A planning meeting was held via phone conference on May 7, 2019 with City Clerk Jeanette Beekman participating.

*c. Community Capabilities*

Locally developed resources as provided are complemented by supports as available through county, region, and state programs (included in region and county profiles as applicable).

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
Floodplain Ordinance	Storm Water Ordinance
Nuisance Ordinance	Subdivision Ordinance
<b>Programs</b>	
National Flood Insurance Program (NFIP) Participant	CID #190295
ISO Fire Rating (not updated)	Pierson Class 5; Pierson FD, Class 8/9
Tree Trimming Program	In effect @ parkings
<b>Staff/Department</b>	
Public Works Official	
Emergency Management Coordinator	City Clerk @ local level
Emergency Response Team	Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	American Legion Harrison/Pedersen Post #291
	American Legion Auxiliary
Community Organizations	Pierson Town and Country
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	

Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water and sewer services	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Ability to withhold spending in hazard prone areas	

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* The community center may serve as a cooling station. Schools may be available depending on use at the time. During school/activities, limited to student refuge and not general public.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* A program was implemented within last few years. Still available upon request with installation included. Not an on-going program.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A small generator has been set up set up through for the fire department. City would benefit from additional generators, with a portable one available at the fire department, for

the storm siren, and at City Hall/Community Center to maintain operation and establish command center as needed. The city would benefit from acquisition of an ATV. Monitoring function of systems and accessing critical areas are hindered during weather emergencies. Training needs are met.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Property acquisition is not a practical consideration for Pierson. Floodplain just edges up to developed properties. Some drainage projects are in progress, though no detail was provided. A formal preservation program is not in place. One may be implemented as means of substantiating support for underfunded projects.

**Action 2.2.1:** Capital Improvements Program.

*Status:* A CIP is in place. Upon completion of the updated Comp Plan, projects will be cross-referenced on a 5-year planned out schedule.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Pierson is a participant in the NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Tree plantings are addressed in terms of restrictions of types and placement within city ordinances. A list of banned species is included. A planting plan is not in place. Maintenance is address in regard to right-of-way responsibility. No formal education programs are in place. Council takes action as needed in lieu of a tree board.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision and Floodplain regulations are in place. The 2015 International Property Maintenance Code was adopted in recent years.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Burn restrictions are included in city ordinances.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* No formal program in place. City newsletter has a "safety corner" that can be used for preparedness messages. Can implement PSA to distribute info.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* A parking ban is implemented in the business district during snow emergencies. A planned route is in place for removal.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* No action taken. A basement area is available at the park shelter. There is interest in having a formal tornado shelter but funding is not readily available. Related concerns: structure would need to be locked or supervised.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communications are established through the city webpage, Facebook and other social media. One warning siren is in place and is sounded through County Communications. Warnings can be initiated by the City. Radios are on-site at the elementary/middle school, though text alerts are more effectively received. Active promotion of Alert Iowa is not currently in place. Handheld radios are used for interdepartmental communications.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Pierson was included in the NOAA Storm Event Database for five events as reported in the past five years. Hail accounted for one incident, the remaining were Flood. Floodplain covers the about one-third of the corporate boundaries, diagonally across the southwest corner. Most affected property is already designated for agriculture use.

##### *Priority Hazards*

- Tornado/Windstorm



- Flood
- Severe Winter Storm

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 11. Salix

a. *Profile*

The city of Salix is centrally located in the southwestern quarter of Woodbury County. Interstate 29 bisects the city, although most of the commercial and residential structures are located east of the interstate.

Along the western border is Browns Lake, and beyond that is the Missouri River. Brown's Lake Bigelow Park and Woodbury County Conservation are also located west of the City. Further from city limits and to the east is the Luton Wildlife Management Area, and to the south is the Lakeport Area. More information can be found on the City of Salix's website.

*City Governance & Community Supports*

Salix is governed by a Mayor and City Council who are elected by residents. The Mayor appoints a Mayor Pro Tem who serves as a voting member of Council. In addition, Council is composed of five (5) voting members. Staffed positions include City Clerk and Maintenance. Salix Fire & Rescue is located in the center of town and is staffed by volunteers. This department also provides ambulance services. The city contracts with the County for law enforcement.

The City of Salix is a member of the NFIP program. The Municipal Code of Ordinances was last updated in 2018.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Salix was 363. American Community Survey (ASC) data estimates show the 2017 population declined slightly to 349. According to the 2013-2017 ACS 5-year estimate, the median household income is \$55,000, slightly higher but generally

consistent with Woodbury County. The City has a smaller percent of its population below the poverty level when compared to Woodbury County, at 8.1% and 14.0% respectively.

<b>Community Characteristics</b>	
Population (2010)	363
Population (2017)	349
Total Households	154
Median Household Income	\$55,000
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	18	5.2%	7.3%	6.3%
65 years and older	54	15.5%	14.3%	16.0%
Below the poverty level	28	8.1%	14.0%	12.0%
Living with a disability	45	12.9%	12.4%	11.6%

The total housing units in Salix is 173. Of those, 154 units are occupied resulting in an 11% vacancy rate. Like much of Woodbury County, the city’s housing stock is aging. Over half of all residential structures are 50 or more years old. Newer homes, built in 2000 or later, make up 8.7% of the housing stock.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	173	-
Occupied	154	89.0%
Vacant	19	11.0%
Mobile Homes	14	8.1%
<b>Age of Residential Structure</b>		
Built 2000 or later	15	8.7%
Built 1970 – 1999	63	36.4%
Build 1969 or earlier	95	54.9%

More demographic and community data can be found on the U.S. Census webpage for Salix.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment are not represented in this value.

2019 Valuation of City Assets

**Total Building Valuation \$ \$1,841,404**

*Leading Employers*

While not hosting a large number of employees, the following businesses operate and have established a necessary presence in Salix:

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities

City Hall	317 Tipton St,
Salix City Park	
Filtration House	203 Tipton St
Pump House	110 Tipton St
Pump House	120 Tipton St
Water Tower	130 Tipton St
Lift Station, West	Tama St at Willow St
Lift Station, East	Hwy 75 at Walnut
Vacant City Lot	306 Tipton
Park Buildings	303 Walnut
City Maint Shed	311 Tipton

Community Supports, Vulnerable Populations, and/or Gathering Locations

Bader Sales and Service	Roger’s I-29 Auto Repair
Creative Steel	Steinhoff Landscape & Construction
Head and Nails Beauty Shop	Walker’s Restaurant and Bar
Pioneer Bank	Salix Community United Methodist Church
Port Neal Welding & Creative Steel	St. Joseph Catholic Church
Brown's Lake (State Park)	722 Bigelow Park Rd

Snyder Bend Park (State Park)	2924 Snyder Bend Rd
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*b. Participation*

A planning meeting was held on May 16, 2019 via phone conference with City Clerk Kathy Brouillette participating. One response specifying Salix as represented jurisdiction was submitted through the public input process.

*c. Community Capabilities*

Following are the local supports in place to complement resources as available at the county, region, and state levels.

<b>Plans/Guidance Documents</b>	
<ul style="list-style-type: none"> <li>• Capital Improvement Plan</li> <li>• Comprehensive Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Flood Mitigation Assistance (FMA) Plan</li> <li>• Land Use Plan</li> </ul>
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Debris Management Plan</li> <li>• Drainage Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Storm Water Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
National Flood Insurance Program (NFIP) Participant	CID #190296
ISO Fire Rating ( <i>Not updated</i> )	4 (in town)/4Y (Brown's Lake area)
Planning/Zoning Boards	
Tree Trimming Program	
<b>Staff/Department</b>	
Building Code Official	
Building Inspector	
Public Works Official	Public Works Director
NFIP Floodplain Administrator	
Emergency Response Team	Fire and Rescue
<b>Non-Governmental Organizations</b>	

Community Organizations	Salix Fireman's Auxiliary
	Park Committee
<b>Local Funding Availability</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water, sewer, gas, or electric services	
Impact fees for new development	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Ability to withhold spending in hazard prone areas	Yes

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* Community Center may be used as cooling shelter when open. Keyed entry can be enabled as needed.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No action taken on this item.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* A generator is in at the water plant. A generator backup is in place for the fire department. Fire Dept added an ambulance, a command truck, and a grass rig to its vehicle set. There is likely need for new equipment but no detail has been provided.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No acquisition programs are in effect. Areas being developed are not in the floodplain. Drainage improvements have been made by way of cleaning storm sewer drains. Future scheduled maintenance is in place as a preventive measure. Some roadway improvements have corrected drainage issues. Ditch pumps were used to move water from city areas to the drainage district areas, mindful of the specified level allowable.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Salix is a participant in the NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* No formal planting plan is in place. Ordinances include language assigning responsibility of maintenance in parking. Some types are restricted within ordinances,

particular to nuisance causing conditions. Council takes action in lieu of a tree board. An education program has not been implemented.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are in place with further guidance provided in Zoning Ordinances. The IBC standard is referenced for new and major construction. No action has been taken regarding floodplain regulations.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* No bans are in place; city communicates weather/conditional bans to residents.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* A monthly newsletter is in place and may be used to communicate awareness and preparedness of hazards. The fire department actively promotes refuge information and community reminders.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow Parking Ban is in place. A removal route is established based on priority access points. Conditions are assessed during snow removal and reported as necessary.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Shelter at Brown's Lake is a designated storm shelter. Fire Station has refuge capacity for 75 people.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The city has a website and active Facebook page. Info can be posted at designated locations and run across the electric sign. One warning siren is in place in town and is scheduled for replacement before the close of 2020. A county siren is in place at Brown's Lake. A weather radio is in place at the fire station, other locations are not known.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders do offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Salix has corporate boundaries that are disjointed at the I-29 on/off ramp area. The western area of the city does have some floodplain including ag lands and into Brown's Lake. Public input indicated top three concerns consistent to those identifies by the City. Salix is included in the NOAA Storm Event Database record of reported events for five incidents in the last five years – all Thunderstorm Wind.

##### *Priority Hazards*

- Flood



- Severe Winter Storm
- Tornado/Windstorm

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

**12. Sergeant Bluff**

a. *Profile*

The city of Sergeant Bluff is located in western Woodbury County. The city is bordered by Interstate 29 to the west, and is bisected by County Highway D38. The Sioux Gateway Airport is located to the west of the City and separates Sergeant Bluff from the Missouri River. More information can be found on the City of Sergeant Bluff website.

*City Governance & Community Supports*

Sergeant Bluff is governed by a Mayor and City Council who are elected by city residents. The Mayor serves as a non-voting member of the City Council. Voting members include the five (5) members of the Council including the Mayor Pro Tem. Offices, Departments, and Boards include the following.

*Staff and Departments*

Building Inspector	Human Resources
City Administrator	Planning & Zoning
City Clerk	Police Department
Finance Director	Public Works
Fire Department	Receptionist

*Boards, Commissions, & Programs*

Board of Adjustment	Planning & Zoning Commission
Mayor Committee Board	Senior Committee Board
Parks & Recreation Board	Urban Revitalization

The Sergeant Bluff Police Department is staffed by a Police Chief, Assistant Police Chief, Office Manager, and six (6) Police Officers (including one (1) K9 officer). The City also has a Fire Department, which is run by volunteers. The Fire Department provides ambulance services. A 28E agreement exists between Sergeant Bluff and Woodbury Township, ensuring that Sergeant Bluff will provide fire protection and other emergency services for all property within the Township. The city also participates in the Enhanced 911 system through the Woodbury County Communication Center in Sioux City.

The Municipal Code of Ordinances was last updated March 22, 2016. A Comprehensive Plan was adopted in 2012.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Sergeant Bluff was 4,227. American Community Survey (ACS) data estimates show the 2017 population at 4,556, indicative of a steadily growing population. According to the 2013-2017 ACS 5-year estimates, the median household income is \$78,750, significantly higher than Woodbury County, which is estimated to be \$51,350. In contrast, Sergeant Bluff also a larger percent of its population below the poverty level when compared to Woodbury County, at 19.3% and 14% respectively.

<b>Community Characteristics</b>	
Population (2010)	4,227
Population (2017)	4,556
Total Households	1,605
Median Household Income	\$78,750
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	237	5.2%	7.3%	6.3%
65 years and older	394	8.6%	14.3%	16.0%
Below the poverty level	879	19.3%	14.0%	12.0%
Living with a disability	363	8.0%	12.4%	11.6%

Nearly a quarter of Sergeant Bluff’s housing stock was constructed between the years of 2000 and 2009. New construction has slowed in recent years. ACS 2017 estimates show 1,620 total housing units. Of those, 1,605 unites are occupied, resulting in a less than 1% vacancy rate.

<i>Housing Characteristics</i>	<i>Count</i>	<i>Percent</i>
Total Housing Units	1,620	
Occupied	1,605	99.1%
Vacant	15	0.9%
Mobile Homes	115	9.6%
<i>Age of Residential Structure</i>		
Built 2000 or later	462	28.5%
Built 1970 – 1999	705	43.5%
Build 1969 or earlier	453	28.0%

More demographic and community data can be found on the U.S. Census webpage for Sergeant Bluff.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Buildings	\$	18,918,713
Personal Property	\$	1,486,511
Property in the Open	\$	<u>5,636,351</u>
<b>total</b>	<b>\$</b>	<b><u>26,041,575</u></b>

Leading Employers

CF Industries
Embassy Rehabilitation and Care Center
Fareway food Stores
Gelita USA, Inc

Sergeant Bluff-Luton Community Schools
Sioux City Brick and Tile

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

Sergeant Bluff-Luton Elementary School	Floyd Place
Sergeant Bluff-Luton Primary School	Friendship community Church
Sergeant Bluff-Luton Middle School	New Life Lutheran Church
Sergeant Bluff-Luton High School	Pioneer Valley Living/Rehab
American Legion	River Bend Apartments
Bluff View Home	Shepherd of Peace Lutheran Church
Community United Methodist Church	UnityPoint Clinic Family Medicine
Embassy Rehab & Care Center	

This list is not exhaustive. Additional community supports may include private businesses and individuals. Residents of Sergeant Bluff can also utilize facilities and services provided by nearby communities, such as Sioux City and Salix.

*b. Participation*

A planning meeting was held at Sergeant Bluff City Hall on April 4, 2019. Following are those in attendance.

Aaron Lincoln	City Administrator
Mark Huntley	Public Works
Scott Tack	Police Dept
Jason Kvidera	Finance
Michelle Colvert	City Clerk
James Colvert	Inspection Department

A display inviting public comment was in place at the Senior Center and then at City Hall. No comments were submitted at either location.

c. *Community Capabilities*

Sergeant Bluff has in place several supports to guide planning focused on resiliency. In addition to those listed, county, region, and state programs are also available. Those resources are listed in the county and region profiles.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
Capital Improvement Plan	
Land Use Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Debris Management Plan</li> <li>• Drainage Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Historic Preservation Ordinance</li> <li>• Landscape Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Storm Water Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
Codes Building Site/Design	
National Flood Insurance Program (NFIP) Participant	Yes, CID #190297
ISO Fire Rating	Sergeant Bluff Class 2; Sergeant Bluff FD, Class 2
Property Acquisition	
Planning/Zoning Boards	
Tree Trimming Program	
Mutual Aid Agreements	In addition to county, agreements also in place with North Sioux City and South Sioux City
<b>Staff/Department</b>	
Building Code Official	Engineer
Building Inspector	Historic Preservation
Development Planner	Public Works Official
Emergency Management Coordinator	City Clerk @ Local Level
Emergency Response Team	Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	George Nelson American Legion
Community Organizations	

<ul style="list-style-type: none"> <li>• Community Action Team</li> <li>• Kiwanis International</li> </ul>	<ul style="list-style-type: none"> <li>• Sergeant Bluff-Luton Community School Foundation</li> <li>• Sergeant Bluff-Luton Parent Teach Organization</li> </ul>
<b>Local Funding Availabilities &amp; Authorities</b>	
Ability to apply for Community Development Block Grants	
Ability to fund projects through Capital Improvements funding	
Authority to levy taxes for a specific purpose	
Fees for water and sewer services	
Impact fees for new development	
Ability to incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Ability to withhold spending in hazard prone areas	

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* A formal list is not in place. Parks have shade and most have shelters. Residents are aware of public buildings that may offer relief from heat during business hours.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* City program in place is linked to rental inspections. FD will inspect residences upon request, based on availability.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* City Hall has a generator in place; the police department could use one. Public Works has portable generator and one is in place at each lift station except for one. Pumps were rented for the 2019 flood events and the city is considering purchase. Two ATVs are available for use at the Fire Department. Trainings are readily available for city staff and response departments. Through funding received from Tyson, a bunkhouse was added to the fire station in 2018.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Property acquisition has not been implemented. Only one property may potentially be an applicable option. Two of three problem areas have drainage projects planned (tubing). New in 2019, the City implemented a controlled burnout for ditch maintenance from the River to Sully Road, reducing presence of dead vegetation build up. Intentional natural space is included in plans for a drainage ditch study. A retention pond (collector) is in place at Kiwanis Park.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Sergeant Bluff is a participant in the NFIP as a precautionary compliance measure.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* The City participates in the MidAmerican Tree Planting Program periodically but has not implemented a formal plan for the city. Maintenance is addressed in the city ordinances as it pertains to dead/diseased trees, and trees in the public right-of-way or parking. Council acts in lieu of a tree board and no education program is in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision Regulations are included in the City Code. Building Code standards are in place referencing state codes and the 2017 IEC. A planning and zoning commission and rental unit inspector are in place.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open burning is banned by ordinance. Permits can be obtained.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Communication is in place by way of scrolling message board and the City and Police Department's websites and Facebook pages. Awareness and preparedness programs have not been implemented.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow parking restrictions are in place by ordinance. Designated routes for snow removal are in place, with damage assessments as part of the process. Routes are as determined by the Police and Fire Departments.



**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The City has identified the location near the trailer park and townhomes to be a priority location for consideration of adding a tornado shelter. There is no secure building nearby for substantial shelter. Implementation is pending funding.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* An established communications network is in place. For non-weather emergencies, the warning sirens have PA capacity. City Hall has a weather radio, not sure on schools. Lightning detection equipment is in place at ball fields and pool. Four warning sirens are in place, no need for more at present.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements have been made at the county level. Cable television interrupt and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Sergeant Bluff is specified in seven reported storm events in the NOAA Database from the last five years – Thunderstorm Wind, Hail, and Heavy Rain. The city is not impacted by floodplain.

Transportation Incident and Hazardous Materials Incident figure prominently in local concerns due to local industry product, and transport of those products.

#### *Priority Hazards*

- Tornado/Windstorm
- Severe Winter Weather
- Thunderstorm w/Hail & Lightning

#### *e. Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

### 13. Sioux City

#### *a. Profile*

Sioux City is the largest city in Woodbury County. It is located in the northwestern quarter of the county. Interstate 29 runs along the western edge of the City. U.S. Highway 20 and State Highway 75 converge in Sioux City, as do several other County Roads and Highways. North Sioux City, South Dakota and South Sioux City, Nebraska contribute to the greater Sioux City metro region.

The Missouri River is located to the west of Sioux City, and acts as a portion of the western border. This river also divides Iowa from Nebraska. The Big Sioux River meets with the Missouri River in the west side of the northern half of the City. The Floyd River meets with the Missouri in the Center of Sioux City. Several significant greenspaces include Stone State Park, Bacon Creek Park, Sioux City State Prairie Preserve, Riverside Park, South Ravine Park, and Chautauqua Park. More information can be found on the City of Sioux City website.

#### *City Governance & Community Supports*

Sioux City is governed by a five (5)-person City Council, which includes the Mayor and Mayor Pro-Tem. Offices in addition to Council include the following.

- Airport
- Art Center
- City Clerk

- City Manager
- Com Center (911)
- Community Development
- Customer Service
- Economic Development
- Engineering
- Environmental Services
- Events Facilities
- Field Service
- Finance
- Fire Rescue
- Human Resources
- Human rights
- Legal
- Library
- Museum
- Parking
- Parks & Recreation
- Police
- Public Works
- Transit
- Underground Utilities
- Utilities
- Water Plant
- Waste Water Treatment

Sioux City is also served by several municipal boards including:

- Active Transportation Advisory Committee
- Airport Board of Trustees
- Art Center Board of Trustees
- Board of Adjustment
- Building & Housing Code Board
- Civil Service Commission
- Effective Fiscal & Public Policy Committee
- Environmental Advisory Board
- Events Facilities & Tourism Advisory Board
- Gjilan Kosovo Sister City Committee
- Historic Preservation Commission
- Human Rights Commission
- Library Board of Trustee
- Mayor's youth Commission
- Museum Board of Trustees
- Parking & Skywalk System Board of Trustees
- Parks and Recreation Advisory Board
- Planning & Zoning Commission
- Seniors Advisory Committee
- Transit System Advisory Board
- Woodbury County Information & Communication Commission
- Yamanashi City Sister City Committee

The Sioux City Police Department is composed of 125 sworn officers and 25 civilian personnel. The City also has a Fire and Rescue Department. Services performed by this department include fire suppression, emergency medical services, prevention and education, and training. Fire Personnel are employed by the City. There are eight (8) stations throughout the city and one training center. Several 28E agreements exist between Sioux City and surrounding communities and counties in regards to fire response, emergency response, and hazardous materials response.

#### *Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Sioux City was 82,684. American Community Survey (ACS) data estimates show the 2017 population at 82,568, indicative of a stable

population. According to the 2013-2017 ACS 5-year estimates, the median household income is \$48,559, slightly lower than Woodbury County, which is estimated to be \$51,350.

Vulnerable populations are represented at a similar rate compared to Woodbury County and the State of Iowa.

<b>Community Characteristics</b>	
Population (2010)	82,684
Population (2017)	82,568
Total Households	31,434
Median Household Income	\$48,559
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	6,511	7.9%	7.3%	6.3%
65 years and older	11,136	13.5%	14.3%	16.0%
Below the poverty level	12,137	14.7%	14.0%	12.0%
Living with a disability	10,489	12.7%	12.4%	11.6%

There are 33,809 total housing units in Sioux City. Of those, 31,434 were occupied resulting in a 7% vacancy rate. Approximately two-thirds of Sioux City’s housing stock is 50 or more years old. Only 6.3% of current structures were built in 2000 or later. There are 959 mobile homes to consider, although they only compose 2.8% of the housing stock.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	33,809	-
Occupied	31,434	93.0%
Vacant	2,375	7.0%
Mobile Homes	959	2.8%
<b>Age of Residential Structure</b>		
Built 2000 or later	2,122	6.3%
Built 1970 – 1999	8,851	26.2%
Build 1969 or earlier	22,836	67.5%

More demographic and community data can be found on the U.S. Census webpage for Sioux City.

For the purpose of cost-benefit considerations, a valuation of the City's assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

#### 2019 Valuation of City Assets

Real Prop RC	\$	280,410,991
Personal Prop RC	\$	21,631,197
Property in the Open	\$	<u>9,922,599</u>
<b>Total</b>	<b>\$</b>	<b><u>311,964,787</u></b>

#### Leading Employers

The top employers operating within the City are:

- Tyson Foods, 4,183 employees
- Sioux City Schools, 2,511 employees
- Bomgaars, 2,100 employees
- Seaboard Triumph Foods, 2,000 employees
- Mercy Medical Center, 1,532 employees
- Unity Point Health – St. Luke's, 1,434 employees
- Hard Rock Casino Sioux City, 1,389 employees
- Hy-Vee, 1,164 employees
- 185<sup>th</sup> Air Refueling Wing IA ANG, 952 employees
- City of Sioux City, 879 employees
- Western Iowa Tech Community College, 700 employees
- MidAmerican Energy, 519 employees
- Sabre Industries, 509 employees
- Wilson Trailer, 500 employees
- County offices

*Critical Facilities, Vulnerable Populations, & Local Areas of Interest*

City Facilities (including Parks and Gathering Locations)

<b>Miscellaneous City Facilities</b>	
City Hall	405 6 <sup>th</sup> St.
Animal Control Shelter	2400 Hawkeye Dr
Roth Fountain	924 4 <sup>th</sup> St
Martin Towers (bsmt + 2 flrs)	4th & Pierce St
SFD w/attached single car garage	2804 S Lewis Blvd
Transit Office & Garage	2505 4 <sup>th</sup> St.
Sign & Signal Shed; Shed	717-723 Omaha St.
<b>Airport Facilities</b>	
Airport Terminal	Duplex (21 units)
Passenger Loading Bridges (2)	Dwellings (4 units)
Parking Booth	Hangars (133 units)
Misc Bldgs, Equipment Storage, Offices	
<b>Police Department Facilities</b>	
Police Training Center	6602 Allison Ave
Police/Fire Headquarters	601 Douglas St
Police/Fire/Sheriff Memorial Monument	405 6th St
<b>Fire Department Facilities</b>	
Fire Stations (7)	<i>varied</i>
Fire Training Center	1701 Terminal Dr
Fire Storage Building	2119 18 <sup>th</sup> St
Regional Training Tower	6608 Allison Ave
<b>Central Maintenance</b>	
CM Garage; Fuel Station	1823 18 <sup>th</sup> St
CM Storage Building 10	1723 18 <sup>th</sup> St
<b>Public Works Facilities</b>	
Public Works HQ Field Office	1723 18 <sup>th</sup> St
Salt Storage Building	
Asphalt Plant	
Mntc & Storage Building	1823 18 <sup>th</sup> St

Public Service Garage & Storage, Bldg	1821 18 <sup>th</sup> St
<b>Environmental Services</b>	
ES Field Hdqtrs	1921 18 <sup>th</sup> St
Multiple Facilities & Bldgs	(36 addresses)
<b>Parking Ramps</b>	
<ul style="list-style-type: none"> <li>• Heritage Parking (Ramp A)</li> <li>• Discovery Parking (Ramp B)</li> </ul>	<ul style="list-style-type: none"> <li>• River's Landing Parking (Ramp D)</li> <li>• Martin Luther King, Jr Transportation Center</li> </ul>
<b>Skywalk</b>	
Skywalk network - 13 connections	
<b>Libraries</b>	
Morningside Branch	4005 Morningside Ave
Perry Creek Branch	2912 Hamilton Blvd Lower B
Wilbur Aalfs Library	529 Pierce St
<b>Museums/Arts</b>	
Art Center	225 Nebraska St
Gilchrist Learning Center	220 Pierce St
Lamb Productions	417 Market St
Peirce Mansion	2901 Jackson St
Sgt. Floyd Welcome Center	1100 Larsen Park Rd
Sioux City History Museum	607 4 <sup>th</sup> St
<b>Indoor Rec/Event Centers</b>	
Convention Center	801 4 <sup>th</sup> St
IBP Ice Center	3808 Stadium Dr
Long Lines Family Center	401 Gordon Dr
Tyson Events Center	
<b>Cemeteries</b>	
Floyd Park Cemetery	2500 7th St
Graceland Park Cemetery	2651 S Lakeport St
Logan Park Cemetery	3901 Stone Park Blvd

<b>City Parks, Pools, Splash Pads</b>	
Parks Storage/Misc Bldgs	1665 18th Street

- |                                     |                             |                                  |
|-------------------------------------|-----------------------------|----------------------------------|
| • Anderson Dance Pavilion           | • Floyd Monument, Park      | • Lewis & Clark Stadium          |
| • Bacon Creek Park                  | • George St Children's Park | • Lewis Park, Pool               |
| • Boat Ramp                         | • Grandma Moos Park         | • Lyons Park                     |
| • Cecelia Park                      | • Grandview Park            | • Macomb Park                    |
| • Chautauqua Park                   | • Headington Park           | • MidCity Park                   |
| • Chris Larsen Park                 | • Hillcrest Park            | • Riverfront Playground          |
| • Cone Park, Splash Pad             | • Hi-View Park              | • Riverside Park, Aquatic Center |
| • Cook Park, Skate Park, Splash Pad | • Kelly Park                | • Rose Hill Park, Splash Pad     |
| • Dale St Park; Splash Pad          | • Kiddie Park               | • Sanford Center Park            |
| • Dinosaur Park                     | • Krumann Park              | • Sertoma Park                   |
| • Emerson Park                      | • Leeds Park, Splash Pad    | • Smith Villa Playground         |
| • Fairmount Park                    | • Legacy Park               | • Thompson Park                  |
| • Flight 232 Memorial               | • Leif Erickson Park, Pool  | • War Eagle Monument             |

### ***Ball Parks/Recreation Fields***

- |                   |                     |                                  |
|-------------------|---------------------|----------------------------------|
| • Center St. Park | • Kirk Hansen Park  | • Riverside Recreational Complex |
| • Chautauqua Park | • Merch Headid Park | • Rueger Field                   |
| • Goldie Park     | • Miracle Field     | • Strikers Field                 |
| • Hubbard Park    | • Pulaski Park      |                                  |

### *Community Support offices and/or Gathering Locations*

- Schools:
  - Bryant Elementary School, 3040 Jones Street
  - Clark Early Childhood Center, 4315 Hamilton Boulevard
  - Hunt Elementary School, 1114 W 27<sup>th</sup> Street
  - Irving Elementary School, 901 Floyd Boulevard
  - Leeds Elementary School, 3919 Jefferson Street
  - Liberty Elementary School, 1623 Rebecca Street
  - Loess Hills Elementary School, 1717 Casselman Street
  - Morningside Elementary School, 3601 Bushnell Avenue
  - Nodland Elementary School, 3300 S. Cypress Street
  - Perry Creek Elementary School, 3601 Country Club Boulevard
  - Riverside Elementary School, 2303 Riverside Boulevard
  - Spalding Park Elementary School, 4101 Stone Avenue
  - Sunnyside Elementary School, 2700 S Maple Street
  - Unity Elementary School, 1901 Unity Avenue
  - East Middle School, 5401 Lorraine Avenue



- North Middle School, 2101 Outer Drive North
- West Middle School, 3301 W. 19<sup>th</sup> Street
- East High School, 3200 S. Cypress Street
- North High School, 4200 Cheyenne Boulevard
- West High School, 2001 Casselman Street
- Sioux City Career Academy, 627 4<sup>th</sup> Street
- Colleges & Universities
  - Briar Cliff University, 3303 Rebecca Street
  - Morningside College, 1501 Morningside Avenue
  - St. Luke’s College – UnityPoint Health, 2800 Pierce Street
  - Western Iowa Tech Community College, 4647 Stone Avenue
- Hospitals
  - MercyOne Siouxland, 801 5<sup>th</sup> Street
  - UnityPoint Health – St. Luke’s, 2720 Stone Park Boulevard
  - Siouxland Surgery Center, 600 Sioux Point Road
- American Legion, 4021 Floyd Boulevard
- Churches
- Hotels and conferences centers
  - Stoney Creek Hotel and Conference Center, 300 3<sup>rd</sup> Street
  - Hilton Garden Inn Sioux City Riverfront, 1132 Larsen Park Road
  - Hard Rock Hotel & Casino, 111 3<sup>rd</sup> Street
  - Others not listed here

This list is not exhaustive. Additional community supports may include private businesses and individuals. Residents of Sioux City can also utilize facilities and services provided by nearby communities. Cumulatively, these all add to the city’s network of support and communication in times of crisis.

*b. Participation*

A planning meeting was held at City Hall on June 26, 2019. Following are those that were in attendance.

David Carney	Director	Public Works
Ryan Collins	Deputy Fire Marshall	SCFR

Martin Dougherty	Director	Economic Development
Joe Fontenot	Supervisor	Waste Water Treatment Plant
Jeff Hanson	Manager	Community Development Operations
Jon O'Brien	Superintendent	Underground Utilities
Brad Puetz	Superintendent	Water Plant
Mark Simms	Director	Utilities, Waste Water Treatment Plant, Water Plant

Public input opportunities were available online, at two congregate meal sites, and at the Woodbury County Fair. Ten respondents indicated Sioux City as jurisdiction represented.

*c. Community Capabilities*

<b>Plans/Guidance Documents</b>	
<ul style="list-style-type: none"> <li>Comprehensive Plan</li> <li>Capital Improvement Plan</li> </ul>	<ul style="list-style-type: none"> <li>City Economic Development Plan</li> <li>Land Use Plan</li> </ul>
Critical Facilities Plan (Mitigation/Response/Recovery)	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>Building Code</li> <li>Drainage Ordinance</li> <li>Floodplain Ordinance</li> <li>Historic Preservation Ordinance</li> <li>Landscape Ordinance</li> <li>Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>Open Burn Restrictions</li> <li>Storm Water Ordinance</li> <li>Subdivision Ordinance</li> <li>Tree Trimming Ordinance</li> <li>Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
Codes Building Site/Design	
National Flood Insurance Program (NFIP) Participant	CID #190298
ISO Fire Rating (not updated)	Class 2/9
Property Acquisition	For funded flood control projects
Planning/Zoning Boards	
<b>Staff/Department</b>	
<ul style="list-style-type: none"> <li>Building Code Official</li> <li>Building Inspector</li> <li>Development Planner</li> <li>Emergency Management Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Engineer</li> <li>Mapping Specialist (GIS)</li> <li>NFIP Floodplain Administrator</li> <li>Public Works Official</li> </ul>

<ul style="list-style-type: none"> <li>• Emergency Response Team</li> <li>• Historic Preservation</li> </ul>	<ul style="list-style-type: none"> <li>• Sioux City Fire Rescue</li> <li>• Commission and staff liaison</li> </ul>
<b>Non-Governmental Organizations</b>	
American Red Cross	
Salvation Army	
Veterans Groups <ul style="list-style-type: none"> <li>• American Legion Post 307</li> <li>• Veterans of Foreign Wars Post 10753</li> <li>• VFW Post 1973</li> <li>• Daughters of the American Revolution (Martha Washington Chapter)</li> <li>• Children of the American Revolution (Sgt. Charles Floyd Society)</li> </ul>	
Homeowner Associations	Yes, In certain subdivisions
Neighborhood Associations	approximately 11 Neighborhood Coalitions
Chamber of Commerce	Siouxland Chamber of Commerce
<b>Community Organizations</b>	
<ul style="list-style-type: none"> <li>• Junior League of Sioux City</li> <li>• Sioux City Lions Club</li> <li>• Rotary Club-Downtown Sioux City</li> <li>• Downtown Partners</li> </ul>	<ul style="list-style-type: none"> <li>• Downtown Kiwanis</li> <li>• Fraternal Order of Eagles Sioux City #77</li> <li>• Quota International of Sioux City</li> <li>• Rotary Club-Suburban Sioux City</li> </ul>
<b>Local Funding Availabilities &amp; Authorities</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Collect fees for water and sewer services	
Impact fees for new development	
Incur debt through	<ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>
Withhold spending in hazard prone areas	

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

*Status:* Cooling stations are available throughout the city. Splash pads have been added at several parks, enabling use for cooling. Specific measures have been put into place to provide relief from direct heat including but not limited to shade structures at the new park near the Children's museum.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* Program in place through the city. On-going for residents upon request and through housing program.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Several projects were implemented in recent years. Well #2 floodwall @ \$250,000; Water plant and well improvements; library, parking ramps, and sky walks had work improving security (lighting) in addition to other improvements. Apparatus purchases are planned for new fire station at Southbridge.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Extensive work has been done throughout Sioux City to improve drainage and general flood resiliency. Those as completed are on file for review through the city. Green space and natural open space considerations are incorporated into planned projects, and at times define projects.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

Status: With the exception of disaster-related projects requiring immediate implementation, projects are included in the CIP.

**Action 2.2.1:** Capital Improvements Program.

Status: A CIP is in place. Projects as determined necessary are included in this as an extended work plan, and are tied together with the City's Comprehensive Plan.

**Action 2.2.2:** Participation in National Flood Insurance Program.

Status: Sioux City is a participant in NFIP.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

Status: A formal tree planting plan is not in place, though plantings are planned out to some extent. Maintenance is addressed in the Code of Ordinances regarding responsibility of trees in the right-of-way and parkings. Some types and locations for plantings are restricted under nuisances. No formal education programs are in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Subdivision regulations are in the City Code. IBC is referenced in the code as well as the International Mechanic Code. Floodplain regulations are in place, though boundaries may change when update is complete through DNR and the Iowa Flood Center.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* Open burning is prohibited by ordinance in city limits.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Fire Department actively promotes Alert Iowa notification system. Scheduled tests are conducted on warning sirens. The fire department hosts safety days and provides education on car and home safety. Other programs specific to awareness and preparedness are not in place.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Snow route maintenance is in place, including gravel road access. Damages are assessed during snow removal process. A Priority Route Map can be found online.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:*

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Several lines of communication are in place from the city webpage to email distribution lists. Coordinated efforts with law enforcement and fire rescue will ensure consistent information. The city has warning sirens throughout city limits and no additional needs are known. KCAU has had a weather radio distribution program. Sirens and FD vehicles have PA capacity.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city's jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

#### d. *Risk Assessment*

##### *Contributing Factors*

Sioux City and the Sioux City Airport are included in reported Storm Events in the NOAA Database records showing occurrence of 24 events on 18 dates. Thunderstorm Wind and Hail are most frequent, with a single funnel cloud reported. Data from the preceding 10-year period reflects similar conditions. River flooding, as it does not typically reflect local conditions, but those out of the region, is a growing concern. Flash flooding and frozen or saturated ground is becoming more frequent. Transportation Incidents are a concern due to number of large-scale employers in the region and the number of people commuting in and out of town for employment. Tornadoes remain a regional concern. Transportation incident and Hazardous Materials Incident are frequent in and around the city, usually made worse with extreme weather conditions. Sinkholes and landslides are infrequent but tend toward extreme when they do occur. The only hazards that are not a significant concern are Radiological Incident and Earthquake. Collected public comment responses are consistent with the top three concerns as determined by the city, with Tornado given equal consideration.

### *Priority Hazards*

- Flood
- Severe Winter Weather
- Thunderstorm w/Hail & Lightning

### e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

## 14. Sloan

### a. *Profile*

The city of Sloan is located in the southwest corner of Woodbury County. In the southwest corner of the City, State Highway 141 and Old Highway 75 intersect. Sloan is situated just east of Interstate 29. Boyer Ditch is continues south out of the City. More information can be found on the City of Sloan website.

Land was annexed to include Dollar General within corporate boundaries.

### *City Governance & Community Supports*

Sloan is governed by a five (5) person elected council and the Mayor. Offices in addition to the Mayor and Council include the following.

- Animal Services
- Emergency Services (Fire & Rescue Department)
- Gas & Electric Utilities
- Local Phone / Cable / Internet Utilities
- Parks & Recreation
- Sanitation & Recycling
- Water Utility

The City is also served by the Planning & Zoning Commission. The City of Sloan Fire and Rescue Department is staffed by volunteers. Law enforcement is provided by the County.



The City of Sloan is a member of the NFIP program.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Sloan was 973. American Community Survey (ACS) data estimate show the 2017 population at 1,118, indicative of a steadily growing population. According to the 2013-2017 ACS 5-year estimates, the median household income is \$59,583, which is higher than Woodbury County, which is estimated to be \$51,350. Sloan's percent of population below the poverty level falls in-between the County and the State estimates.

<b>Community Characteristics</b>	
Population (2010)	973
Population (2017)	1,118
Total Households	433
Median Household Income	\$59,583
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	59	5.3%	7.3%	6.3%
65 years and older	198	17.7%	14.3%	16.0%
Below the poverty level	154	13.8%	14.0%	12.0%
Living with a disability	123	11.0%	12.4%	11.6%

Total housing units in Sloan is 461. Of those, 433 are occupied resulting in a 6.1% vacancy rate. Just under half of the total housing stock was constructed 50 or more years ago. Since 2000, 32 residential structures have been constructed. Some new construction has been completed within the last five years, adding single-family homes and tri-plex dwellings to the local inventory.

<b>Housing Characteristics</b>	<b>Count</b>	<b>Percent</b>
Total Housing Units	461	-
Occupied	433	93.9%
Vacant	28	6.1%

Mobile Homes	3	0.7%
<b>Age of Residential Structure</b>		
Built 2000 or later	32	6.9%
Built 1970 – 1999	206	44.7%
Build 1969 or earlier	223	48.4%

More demographic and community data can be found on the U.S. Census webpage for Sloan.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

2019 Valuation of City Assets

Building	\$	8,414,628
Personal Property	\$	554,626
EDP - Hardware	\$	25,000
EDP - Software	\$	25,000
Misc Property Sched	\$	199,188
Misc Property Unsched	\$	<u>7,000</u>
<b>Total</b>	<b>\$</b>	<b><u>9,225,442</u></b>

Leading Employers

Sloan is primarily composed of smaller businesses and workplaces. Leading employers for the City include:

- Westwood Community School District
- Uncommon Grounds
- WinnaVegas Casino and Hotel (outside city limits)

Critical Facilities, Vulnerable Populations, & Local Areas of Interest

City Facilities

City Hall	428 Evans St
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Community Center	423 Evans St
Park & Splash Pad	418 Alderson St
Park Restrooms	403 Buckley
Water Treatment Plant	700 Johnson St
Maintenance Garage	
Sewage Treatment Plant	
Pump/Electric Switches	5th St @ Brown St
Water Tank	Old Hwy 75 @ Johnson St
Pump House	425 4th St
Sports Complex	400 8th St
Hopkins Bldg	502 Brown St
Library	502 Evans St
Lift Station	1870 Hwy 141
Golf Course/Clubhouse	3212 Old Hwy 75
Transformer	
Pump House	208 5th St
Water Tower	

Community Supports, Vulnerable Populations, &/or Gathering Locations

Westwood Schools	1000 Rebel Way
Burgess Clinic	409 Evans St
Community Church of Christ	502 Beall
Skien Lutheran Church	11929 Aspen Ave
Evangelical Covenant Church	306 Buckley

This list is not exhaustive. Additional community supports may include other private businesses and individuals. Residents of Sloan can also utilize facilities and services provided by nearby communities. Cumulatively, these all add to the city's network of support and communication in times of crisis.

b. *Participation*

A planning meeting via conference call was conducted on May 16, 2019 with City Clerk Dixie Iverson in attendance.

c. *Community Capabilities*

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Drainage Ordinance</li> <li>• Floodplain Ordinance</li> <li>• Landscape Ordinance (w/in covenants)</li> <li>• Nuisance Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Storm Water Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> <li>• Zoning Ordinance</li> </ul>
<b>Programs</b>	
Zoning/Land Use Restrictions	
Codes Building Site/Design	w/in covenants; restrictions when buying
National Flood Insurance Program (NFIP) Participant	CID #190299
ISO Fire Rating (not updated)	Sloan Class 6; Sloan FD, Class 6/9
Property Acquisition	
Planning/Zoning Boards	
Tree Trimming Program	
<b>Staff/Department</b>	
Building Code Official	
Building Inspector	
Public Works Official	
Emergency Management Coordinator	City clerk @ local level
Emergency Response Team	Fire and Rescue
<b>Non-Governmental Organizations</b>	
Veterans Groups	Smith-Rhodes American Legion
<b>Local Funding Availability</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Collect fees for water and sewer services	
Ability to incur debt through <ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> <li>• private activities</li> </ul>	

*Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* A list is not maintained but the community center, fire station, and city hall are known to be available for refuge as needed.

**Action 1.1.2:** Provide smoke detectors to property owners.

*Status:* No action taken by City; program may be available through fire department or public health.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* New generator at Waste Water and Water Plants.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.3.4:** Preserve Natural Open Spaces.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Flooding not a major concern. No action taken on item 2.1.2. Repairs include drainage and sewer lines (replaced linings) at \$50,000 per year investment nearly done.

**Action 2.2.1:** Capital Improvements Program.

*Status:* Formal program not in place. Projects presented case-by-case per department, allowing for collaborative action. Project balances are discussed annually with leftover applied to premiums, enabling additional project funding.

**Action 2.2.2:** Participation in National Flood Insurance Program.

*Status:* Sloan is a participant in NFIP. Most affected area is outside city limits.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.2:** Education on tree types and planting.

*NOTE: Tree-related actions and strategies are combined for discussion, as each strategy listed in the previous plan is inter-related.*

*Status:* Trees are addressed in the City Code in regard to public right-of-way maintenance and restrictions based on nuisances. Council acts on related matters in lieu of a tree board. No tree-related education programs are in place.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

*NOTE: Action Items combined due to common characteristics and revision process.*

*Status:* Standard subdivision regulations are in place. International building codes was adopted in 2012. Floodplain regulations are not needed.

**Action 2.3.7:** Implement Burning Ban Regulations.

*Status:* County burn bans are followed. A city burn pile is controlled and FD rep is on site when lit.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Annual newsletter includes safety reminders. City may also use electronic sign, designated posting locations, Facebook, and the city website.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Maintenance is routine during snow removal. Additional roadway to clear with transfer of in-town portion of Hwy 75 to City. Damages assessed during removal as applicable with further action taken as needed.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Communication to residents is established. Street closures are communicated via regional news. Three warning sirens are in place. Two are sounded through the County Communications Center, one at the water tower is manually sounded by the City. Battery or generator backup in place. City actively promotes Alert Iowa subscription. Weather radios are not in place as technology-based alerts in use.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Local weather radio service improvements, cable television interrupt, and telephone interrupt/reverse 911 services do not fall within the city’s jurisdiction. However, cable and telephone franchise holders may offer interrupt/warning services as standard provisions.

d. *Risk Assessment*

*Contributing Factors*

Sloan is listed in the NOAA Storm Event Database for five events in the past five years – Hail and Flood. Corporate boundaries do not include floodplain.

*Priority Hazards*

- Tornado/Windstorm
- Severe Winter Storm
- Flood – *both river and flash flood issues as they impact residential basement flooding*

e. *Mitigation Actions & Strategies*

Details as available for needed and/or planned projects for the City are included in the listing of Region Mitigation Actions, Strategies, & Projects in Title III, Section G of this plan.

**15. Smithland**

a. *Profile*

The city of Smithland is situated in south central Woodbury County. State Highways 141, 31, and 982 all converge near the center of Smithland. The Little Sioux River runs to the east and south of the City. An oxbow lake can be found just south of city limits.

*City Governance & Community Supports*

Smithland is governed by a five (5) person elected City Council and a Mayor. Offices in addition to Mayor and Council include City Clerk. The Little Sioux Grant Township Fire Department is located in Smithland and is staffed by volunteers. The City contracts with Woodbury County for law enforcement services.



The City of Smithland is a member of the NFIP program. The Municipal Code of Ordinances was last updated in 2010; however, a new update is underway. A Comprehensive Plan is also in the process of being created. There is no estimated adoption date at this time.

*Demographics, Housing, & Economics*

Based on 2010 Census data, the population of Smithland was 224. American Community Survey (ACS) data estimate show the 2017 population at 143, indicating significant population decline. According to the 2013-2017 ACS 5-year estimates, the median household income is \$32,583, which is significantly less than Woodbury County, which is estimated to be \$51,350. Smithland has proportionally more of its population below the poverty level compared to both the County and the State.

The City has a significant percent of its population age 65 or above. Additionally, a comparatively large percent of Smithland’s population is living with a disability. Both of these categories are considered vulnerable according to FEMA.

<b>Community Characteristics</b>	
Population (2010)	224
Population (2017)	143
Total Households	67
Median Household Income	\$32,583
Median Household Income – Woodbury County	\$51,350

<b>Vulnerable Populations</b>	<b>Count</b>	<b>Percent</b>	<b>Woodbury</b>	<b>Iowa</b>
5 years and younger	5	3.5%	7.3%	6.3%
65 years and older	41	28.7%	14.3%	16.0%
Below the poverty level	27	18.9%	14.0%	12.0%
Living with a disability	34	23.8%	12.4%	11.6%

Total housing units in Smithland is 91. Of those, 67 are occupied resulting in a 26.4% vacancy rate, which is high for the region. Mobile homes account for 7.7% of the housing stock. Only two residential structures have been constructed since 2000. Nearly three quarters of the housing stock is 50 or more years old.

<i>Housing Characteristics</i>	<i>Count</i>	<i>Percent</i>
Total Housing Units	91	-
Occupied	67	73.6%
Vacant	24	26.4%
Mobile Homes	7	7.7%
<i>Age of Residential Structure</i>		
Built 2000 or later	2	2.2%
Built 1970 – 1999	22	24.2%
Build 1969 or earlier	67	73.6%

More demographic and community data can be found on the U.S. Census webpage for Smithland.

For the purpose of cost-benefit considerations, a valuation of the City’s assets was compiled based on its insured properties, personal property, and facilities. The value as provided does not include private properties, equipment, or non-city funded investments that may contribute to project determinations. Separately catalogued assets and equipment may not be represented in this value.

*2019 Valuation of City Assets*

Building	\$ 268,030
Personal Property	\$ 22,747
Property in the Open	\$ <u>79,666</u>
<b>Total</b>	<b>\$ <u>370,443</u></b>

*Leading Employers*

Leading employers in town include the Country Store and Crossroads Pub.

*Critical Facilities, Vulnerable Populations, & Gathering Locations*

Smithland City Hall	110 Jackson St
Pump House	N Hickory
Ball Park	
City Maintenance Bldg	
Museum	S Hickory

Lagoon & Related	301 W Main St
Back-Up Well; Water Pump	210 Pine St

**b. Participation**

A planning meeting was conducted via phone conference on June 21, 2019 with Amanda Kafton, City Clerk. Through public input opportunity, one respondent indicated Smithland as jurisdiction represented.

**c. Community Capabilities**

In addition to resources as available through county, region, and state programs, Smithland has in place the following supports as means of attaining resiliency.

<b>Plans/Guidance Documents</b>	
Comprehensive Plan	
<b>Policies/Ordinance</b>	
<ul style="list-style-type: none"> <li>• Building Code</li> <li>• Debris Management Plan</li> <li>• Floodplain Ordinance</li> </ul>	<ul style="list-style-type: none"> <li>• Nuisance Ordinance</li> <li>• Subdivision Ordinance</li> <li>• Tree Trimming Ordinance</li> </ul>
<b>Programs</b>	
National Flood Insurance Program (NFIP) Participant	CID #190300
ISO Fire Rating	Smithland Class 8; Smithland FD Class 8/9
<b>Staff/Department</b>	
Public Works Official	
Emergency Management Coordinator	City clerk @ Local level
Emergency Response Team	Fire Department; Oto Ambulance
<b>Non-Governmental Organizations</b>	
Veterans Groups	Leslie F Seaton American Legion and Auxiliary
<b>Local Funding Availabilities &amp; Authorities</b>	
Apply for Community Development Block Grants	
Fund projects through Capital Improvements funding	
Levy taxes for a specific purpose	
Collect fees for water and sewer services	
Ability to incur debt through <ul style="list-style-type: none"> <li>• general obligation bonds</li> <li>• special tax bonds</li> </ul>	

- private activities

### *Review of Actions Taken*

Following is an accounting of strategies in place and actions taken that address those items included in the 2014 county multi-jurisdictional plan. Status of all items as shown are considered closed unless additional measures are stated here and/or included in the regional listing of 2019 Mitigation Actions, Strategies, and Projects in the Region chapter of this plan.

**Action 1.1.1:** Maintain a list of sites for use as cooling stations in extreme heat.

**Action 1.1.2:** Provide smoke detectors to property owners.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.2:** Improve or acquire high-risk to flooding property.

**Action 2.1.3:** Improve drainage patterns in and around the community.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

**Action 2.1.5:** Roadway Elevation and Access.

**Action 2.2.2:** Participation in National Flood Insurance Program.

**Action 2.2.3:** Tree Planting Plan.

**Action 2.2.4:** Tree Maintenance Plan.

**Action 2.3.1:** Improve and Maintain Subdivision Regulations.

**Action 2.3.2:** Evaluate and Improve Building Standards.

**Action 2.3.3:** Continue/Begin Floodplain Regulations.

**Action 2.3.4:** Preserve Natural Open Spaces.

**Action 2.3.5:** Tree Board.

**Action 2.3.6:** City Ordinance for Trees.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.1.2:** Improve the maintenance of roadway snow routes.

**Action 4.1.3:** Snow Plan.

**Action 4.1.4:** Obtain adequate equipment and training for first responders.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.1:** Improve communication to residents and businesses during and following emergencies.

**Action 4.3.2:** Community warning system.

**Action 4.3.3:** Improve local weather radio service.

**Action 4.3.4:** Cable TV interrupt warning system.

**Action 4.3.5:** Telephone interrupt warning system/reverse 911.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*Status:* No action specific to mitigation was taken on the above items. Record of programs already in place are indicated in the capabilities section of this community profile. No scheduled projects were provided in preparation of this plan. However, should the city proceed to implementing an action as set forth in the listing of Mitigation Actions, Strategies, and Projects as provided in Title III, Section G of this plan, they may amend the plan at their jurisdiction level.

d. *Risk Assessment*

*Contributing Factors*

Smithland is referenced three times in the NOAA Storm Event Database in the past five years – Thunderstorm Wind and Hail. About half of Smithland is affected by floodplain. Input as provided include high level of concern for Transportation Incident, Tornado/Windstorm, Thunderstorm w/Hail & Lightning, and Grass or Wildland Fire, which are reasonable consistent with the priority hazards as determined by the City.

*Priority Hazards*

- Tornado/Windstorm
- Grass or Wildland Fire
- Flood

e. *Mitigation Actions & Strategies*

Though no recorded activity occurred since the last Plan, Smithland has included one project as included in the listing of region projects beginning on page 79 of this Plan.



## V. School Districts Participating as Jurisdictions

### A. Summary of Relevance to Plan

All districts serving the Region and containing at least one facility within Region boundaries have participated in the development of this Plan. Every district is interested in enhancing available training in regard to tornado, fire, and active shooter/intruder drills. Security and related systems undergo constant review and analysis, with upgrades implemented as needed. Additionally, many have identified projects that have a side benefit of positively supporting mitigation of weather-related disasters including but not limited to:

- Roofing and/or structural improvements to reduce hail damage potential and/or leaks from heavy rain/snow,
- improved drainage to specifically redirect water flows away from structures,
- enhanced protocol for tornado and lightning emergencies during outdoor activities,
- establishing water reservoirs or drainways to reduce effects of washout during heavy rain and/or rapid snowmelt.

While most districts discussed interest in these and other projects related to hazard mitigation, only a few provided specified actions, strategies and projects, thereby deeming those districts eligible for funding supports for projects as may be outlined in this Plan. School districts may also benefit from projects initiated by the community or county hosting facilities, either directly or indirectly, from those implemented by respective host entities. Collaborative and independent projects may also be mutually beneficial. In the interest of maintaining the context of a Regional Plan, identified details as available for needed and/or planned projects for all School Districts are included in the Region listing of Mitigation Actions, Strategies, & Projects. As applicable, projects may be listed according to the city hosting the facility needing mitigation action. In the event of district-wide program implementation, the project may be included under the listing of the city hosting administrative offices. ***Please note that all school districts identified in the jurisdiction listing have actively participated in the development of this Plan. However, for districts that 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 respective jurisdictions as eligible applicants for Pre-Disaster Mitigation Funds.*** Information outlining the amendment process is discussed in Title I. *Introduction,*

Section H. *Amendments and Plan Maintenance*. Templates for amendments and subsequent adoption at the School Board level are found in Appendix D.

## 1. Akron-Westfield

### a. Profile

#### *Students & Staffing*

##### 2018-2019 School Year Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	34	3	44	7	48	11	51
K	57	4	48	8	45	12	38
1	39	5	42	9	50	<b>total</b>	<b>639</b>
2	47	6	55	10	41		

#### Staffing

Certified Teachers	52	Support Staff	72
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#### *Facilities*

Akron-Westfield Facility Name	Address	Building Construction Date	Damages	Structure in Floodplain	Tornado Safe rooms	Bldg. Ins. Valuation
Elementary School	850 Kerr Dr	1977/1997	Wind	No	No	\$21,234,152
Middle School	Akron, IA 51001					
High School						
Bus Barn	300 N Hwy 12	n/a				

### b. Participation

A planning meeting was held on May 7, 2019 via phone conference. Mandy McCully (Business Manager) with participating with initial direction provided by Superintendent Randy Collins. No public input respondents contributed on behalf of the A-W CSD.



c. *Capabilities*

Akron-Westfield has an internal emergency response team comprised of teachers and staff to act in the event of any emergency. The school facilities may be opened to the community in the event of a disaster to host a command center and/or displaced residents.

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Cameras and secured entry in place for several years. No generator is available, but there is interest in adding one. Item is on facilities planning list but not scheduled for completion. School is otherwise well equipped.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* Bus barn is only area @ risk for flooding and is well controlled.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* School conducts natural hazard preparation through fire, tornado, and active shooter drills. Online JMC system and reminder aps are part of programming available to students and families. Paper memos are distributed as needed.

**Action 3.1.2:** Education on tree types and planting.

*Status:* A tree-specific curriculum is not in place, nor is one being considered at this time.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Each building has identified tornado safe zones. For bused students, evacuation is practiced. In emergency event such as tornado, drivers are to use best judgement.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Weather radios are not in place at the schools. Text and other tech-based alerts, in addition to the City siren system are resources. Due to location, info alerts and response efforts are more connected to the Sioux County Sheriff's office rather than Plymouth County.

d. *Risk Assessment*

*Contributing Factors*

A-W CSD is located on the north end of Akron, not far from the Big Sioux River. River flooding has been a consistent concern in recent years; however, Flash Flood is more of an issue. With saturated ground, nearby standing water and washout from displaced storm runoff is a community issue. The school's bus barn is in the only flood-prone area is currently well monitored for mitigation. Road closures due to flooding are an issue for access to the schools, but not necessarily within the control of the school to make improvements.

*Priority Hazards*

- Flood – Flash
- Tornado/Windstorm
- Thunderstorm w/Hail & Lightning

2. Alta-Aurelia

a. *Profile*

Two district facilities are located within the planning region represented here. Following information pertains to the Alta-Aurelia Elementary School and Middle School in Aurelia.

*Students & Staffing*

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	12	2	12	6	54	10	n/a
T-K	0	3	13	7	51	11	n/a
K	24	4	18	8	58	12	n/a
1	12	5	53	9	n/a	<b>total</b>	<b>307</b>

*Facilities*

Aurelia Elementary School	300 Ash St Aurelia
Alta-Aurelia Middle School	

*b. Participation*

A planning meeting was held on May 6, 2019 via conference call with Superintendent Lynn Evans participating.

*c. Capabilities*

The school does not have a formal refuge site agreement with the City of Aurelia, however, both are in agreement that the schools may serve as such. The Aurelia facility did not suffer from flood damage in 2020. A weather radio is in place at the school.

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No security-related equipment is needed at this time. Security features have been in place for many years, with upgrades as necessary. The school would like a permanent on-site generator. A mobile one was provided 2-3 years ago.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* No action needed.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan.

*Status:* No action taken on this item.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* School conducts natural hazard preparation through fire, tornado, and active shooter drills. Additional notifications not implemented. As needed, information can be incorporated into routine parental notifications.

**Action 3.1.2:** Education on tree types and planting.

*Status:* A tree-specific curriculum was in place at the middle school under a multi-year curriculum including follow up activities. That program is not currently in place.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Refuge locations are identified within school facilities.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Weather radios are in place at the school. The city's tornado siren is sufficient in warning those within the schools.

d. *Risk Assessment*

*Contributing Factors*

An incident in fall of 2018 resulted in the evacuation of most of the city of Aurelia. The district has expressed concern about lack of communication regarding shelter in place or evacuation. At the time, information was clarified within several minutes, however, depending on situation, those minutes may have been crucial.

*Priority Hazards*

- Hazardous Materials Incident
- Thunderstorm w/Hail & Lightning – concern with power outages
- Sever Winter Storm – in regard to student/staff transportation

**3. Cherokee Community Schools**

a. *Profile*

*Students & Staffing*

2018-2019 Student Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	71	2	82	6	84	10	72
T-K	14	3	87	7	89	11	65
K	88	4	80	8	79	12	72
1	70	5	76	9	72	<b>total</b>	<b>1101</b>

2019-2020 Staffing

The district employs 4 administrators and 174 teachers, paras, cooks, custodians, and drivers.

*Facilities*

Roosevelt Elementary School & ECLC	929 N Roosevelt St
Cherokee Middle School	206 E Indian St
Washington High School	600 W Bluff St

b. *Participation*

A planning meeting was held on February 11, 2019 via conference call with Superintendent Kimberly Lingenfelter in attendance.

c. *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security measures and related equipment have been implemented and updated as necessary. The school has one dedicated line locked into fire alarm system in case of communications failure. School is not currently designated as shelter or refuge, however, district expects to be designated as meet point or refuge if needed. No designated storm/tornado shelter within facilities aside from interior rooms without glass.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* School conducts natural hazard preparation through fire, tornado, and intruder drills. State law requires school to have a high quality emergency operations plan. A Crisis Team meets quarterly. The district uses the WENS system and JMC alerts text alerts. Weather notification go through WENS (no sales, etc.) including directives that follow. Emergency notification system in development. County representatives are active in meetings. May move to building-specific meetings for more involvement w/region meeting less frequently. All guidance counselors and program directors are on the Crisis Team.

**Action 3.1.2:** Education on tree types and planting.

*Status:* A tree-specific curriculum is not in place, nor is one being considered at this time. The district is mindful of tree placement and planning on relocating removed trees from Middle School south to ball field to east of new addition to provide shade.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Improvement guidelines include language re: school building modifications to include shelter technology. None have been implemented to date.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* No information was provided re: weather radio availability. Practice drills are in place, conducted in time with siren testing.

d. *Risk Assessment*

*Contributing Factors*

School district serves area of about 114 square miles, contributing to concern of weather impacting travels, as well as other motorists. Greatest concern for district relates to human-caused hazards. Drills are in place for tornado, fire, and active shooter incidents.

*Priority Hazards*

- Hazardous Materials Incident
- Infrastructure Failure
- Transportation Incident

#### 4. Galva-Holstein

##### a. Profile

###### Students & Staffing

###### 2018-2019 Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	22	2	36	6	n/a	10	60
T-K	8	3	26	7	n/a	11	50
K	46	4	47	8	n/a	12	42
1	29	5	29	9	55	<b>total</b>	<b>428</b>

Preschool numbers are not included in district total.

###### Staffing

Staff	45	Administration	3
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###### Facilities

School	Address	Total Valuation
Ridge View High School	519 E Maple St, Holstein	24,805,251
G-H Elem School		
G-H Upper Elem	207 Noll St, Galva	5,067,171
G-H Middle School	100 Noll St, Galva	
Bus Garage	605 E 2nd St, Holstein	558,925
Bldg	316 S Lubeck St, Holstein	2,438

**Combined Total (RC) \$ 30,133,785**

##### b. Participation

Communications to complete the update of information was exchanged via email with superintendent Jon Wiebers October 11, 2019.

##### c. Capabilities

###### Review of Actions Taken

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past



five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.2:** Mitigate high-risk to flooding property.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*Status:* Actions specific to the items listed above were not completed. Security measures are in place, with controlled access and cameras. The school is connected to county Communications and uses a text alert system to notify parents of closures.

#### d. *Risk Assessment*

##### *Contributing Factors*

Prior to October 2019, the school structures were damage by hail. Repairs were in progress at the time of this update.

##### *Priority Hazards*

- Thunderstorms w/Hail & Lightning – previous hail damages and power outages being the greatest concern.

No other priority hazards were identified.

## 5. Hinton Community Schools

### a. Profile

#### Students & Staffing

##### 2018-2019 School Year Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	40	2	52	6	70	10	50
T-K	28	3	55	7	50	11	46
K	46	4	55	8	61	12	61
1	62	5	49	9	63	<b>total</b>	<b>788</b>

#### Administration & Staff

Staff, including teachers, support staff, and administration is at 99 for the 2019-2020 school year.

#### Facilities

School	Address	Building Construction Date	Bldg RC Valuation
Elementary School	315 W. Grand Hinton IA 51024	2011	\$ 10,583,456
Hinton Middle School		1956 /1962 / 1968	\$ 19,523,691
Hinton High School			
Bus Barn; Other Service Bldgs			
<b>total</b>			<b>\$ 31,861,663</b>

Facilities have incurred hail damage in the past five (5) years and windstorm are a frequent issue. The structures are not in the floodplain and have designated tornado refuge locations that do not include classified as tornado safe rooms.

### b. Participation

A planning meeting was conducted on-site June 6, 2019. Then-Superintendent Peter Stuerman was in attendance with additional information provided by administrative staff. Hinton Community School District was not indicated as respondent jurisdiction for any survey submission for public input.

c. *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided on.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Since 2014, sump pumps have been installed to mitigate standing water and subsequent potential for infiltration of buildings. Cameras and secured entry in place for several years, as well as locked entries during school. A liaison officer is often on site, with an additional resource officer to support efforts with less frequency. The district monitors and updates plans when necessary to reflect current environment. The district has ongoing coordination and communication with the City of Hinton, Plymouth County EMA/EMS. The elementary school has a backup generator and one from the County can be used as needed. The school is informally designated as a refuge location in the event of a disaster, and may serve as command center as needed. As such, an additional generator may be of use but district is concerned about grid capacity, and is not currently considering the addition of one. Should a new building be funded, backup systems will be considered in the new facility plan.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* Flooding is not an issue on property; campus is situated on a hill. Primary issue is transport of students during road closures or conditions where roads should be closed. Discussion is in place to implement remote access to classes when travel conditions limit some students and not others.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan

*Status:* The district's main capital improvement project is a new high school. At the time of planning meeting, a bond issue was being prepared for a ballot vote.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* School conducts natural hazard preparation through fire, tornado, and active shooter drills. Communications are frequent through social media channels (Facebook & Twitter) and a call system is networked for all students upon registration. County-promoted Alert Iowa is also in place for staff, faculty, and administration.

**Action 3.1.2:** Education on tree types and planting.

*Status:* Plantings occur on property but not as a response to mitigation. Types are recommended based on placement and consideration of shade provision. A tree-specific curriculum is not in place, nor is one being considered at this time.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Each building has designated tornado safe zones. For students in fields for school or hosted activity, exposed persons are directed to go inside the nearest facility.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* The administration office directs communications regarding alerts. Text and other tech-based alerts, in addition to the on-site City siren, are resources.

d. *Risk Assessment*

*Contributing Factors*

Hinton Community Schools are located on a single campus, on a hill. While flooding is not a serious concern, runoff can be problematic. Serving a large rural area, as well as

accommodating out-of-district students in open enrollment, road conditions figure prominently in primary concerns. Hail damage is a recent issue, within the past two (2) years, that has required allocation of funds for necessary repairs.

*Priority Hazards*

- Terrorism – *In terms of active shooter concerns, and general student safety. Trainings are implemented but it remains a significant concern for staff and students.*
- Thunderstorm w/Hail & Lightning – *Hail-induced damage is already an issue. Extended power outages are a concern but emergency lighting is in place.*
- Tornado/Windstorm – *wind issues are frequent in the region and tornado is common.*

**6. Kingsley-Pierson**

a. *Profile*

*Students & Staffing*

2018-2019 School Year Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	n/a	2	34	6	31	10	35
T-K	n/a	3	42	7	35	11	29
K	28	4	28	8	51	12	31
1	31	5	35	9	23	<b>total</b>	<b>433</b>

*Staffing*

Kingsley-Pierson Community School District has approximately 94 employees serving as teachers, support staff, and administration.

*Facilities*

School	Address	Construction Date(s)	Bldg. Ins. Valuation
Kingsley Elementary School (K-4)	322 Quest Ave Kingsley	1991/1997/2002	\$6,841,390
Kingsley-Pierson High school (9-12)			
Pierson Elementary (4)	321 4th St Pierson	1915/1970/2003	\$2,367,750
K-P Middle School (5-8)			

**Total**      **\$9,209,140**

Improvements to the auditorium were scheduled for the summer of 2019, so improved valuation is not represented. No record of documented damages has been provided. School structures are not within respective floodplain, and tornado refuge areas are designated in each building. No designation of Tornado Safe Room has been given to space(s) within district facilities.

**b.**      *Participation*

A planning meeting was conducted via phone conference on May 16, with Superintendent Scot Bailey participating.

**c.**      *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* As a security measure, the district has an internal response team in each building. They are leadership teams that guide action during and after incidents. Recent improvements were made in the secured entry system. A generator is on-site in Kingsley, and both locations are air conditioned to reduce the effects of extreme &/or prolonged heat. No additional equipment needs have been identified.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* Mitigation has not been necessary for school facilities in either Kingsley or Pierson.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Late start and school cancelation notifications are sent through an internal system to all enrolled students based on provided contact info. The system can be used for routine notifications and reminders as well. It has not been used as a preventative/preparedness tool as too many communications reduce effectiveness of in-time alerts. As means to improve awareness, the district is promoting Plymouth County Alerts sign-up.

School conducts natural hazard preparation through fire, tornado, and active shooter drills twice per semester.

**Action 3.1.2:** Education on tree types and planting.

*Status:* No current programs specific to education on tree planting and types is in place, nor in consideration.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Each building has designated tornado safe zones, though no certified “tornado safe” rooms.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Weather radios are in the offices at both facilities. The online JNC program provides info to schools. The district is partnered to promote Plymouth County Alerts as activated under the Alert Iowa system. Both schools are served by the warning sirens in their respective communities. A siren is near the golf course in Kingsley and on Main St in Pierson.

d. *Risk Assessment*

*Contributing Factors*

Generators are in place at school facilities in Kingsley, though not in Pierson. Recent regional flooding has not impacted any school facilities, but may have hindered transportation to/from

school and school activities. Sports facilities are on higher ground, so those too, have not been affected. Flooding has not been a major concern in regard to facilities. However, transportation of students while access roads are in varying conditions of use &/or repair has been an issue. Another significant concern falls under the category of Terrorism. Intruder prevention is an ongoing concern resulting in active shooter drills in addition to fire and tornado safety drills.

*Priority Hazards*

- Thunderstorm w/Hail & Lightning – *Frequency & level of impact during outdoor events.*
- Severe Winter Storm – *Transportation concerns as well as general wellbeing of students in extreme cold, icy, and snowy conditions.*
- Tornado/Windstorm – *Winds are the more significant concern for both facilities as they are frequently occurring and likely to incur some damage or other cost for related cleanup.*

**7. Lawton-Bronson**

a. *Profile*

One of 12 districts serving Woodbury County, Lawton-Bronson has a large population of rural and open-enrolled students.

*Students & Staffing*

2018-2019 Student Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	39	2	52	6	44	10	61
T-K	n/a	3	58	7	64	11	51
K	66	4	44	8	54	12	53
1	44	5	62	9	47	<b>total</b>	<b>739</b>

2019-2020 Staffing

The District employs 99 teachers, administrators, and support staff.

*Facilities*

Building

Address

Valuation



Lawton Junior-Senior High School	100 Tara Way, Lawton, IA 51030	\$	4,666,530
Bronson Elementary School	115 W. 1st St, Bronson, IA 51007	\$	610,680
Bus Barn	110 E. Maple, Lawton, IA 51030	\$	112,616

2019 Valuation of District Assets

Buildings	\$	27,755,504
Personal Property	\$	4,264,163
Property in the Open	\$	<u>909,334</u>
<b>Total</b>	<b>\$</b>	<b><u>32,929,001</u></b>

b. *Participation*

Planning for the district was conducted primarily through email exchange with Business Manager, Ryan Anderson in October 2019.

c. *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.2:** Mitigate high-risk to flooding property.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*Status:* The district did not report any mitigation-specific actions implemented since 2014. The district is compliant with state procedures regarding drills, secured access, and monitoring properties. Projects are determined through the School Board on a case-by-case basis.

d. *Risk Assessment*

*Contributing Factors*

Transportation during inclement weather remains a primary concern for the district. Protocol is in place for weather and intruder-related emergencies.

*Priority Hazards*

No priority hazards were identified, though extreme weather and tornado activity are consistently present concerns.

**8. Le Mars Community Schools**

a. *Profile*

*Students & Staffing*

2018-2019 School Year Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	n/a	2	138	6	189	10	172
T-K	18	3	132	7	157	11	170
K	156	4	173	8	188	12	167
1	163	5	174	9	154	<b>total</b>	<b>2,151</b>

*Staffing*

At the time of this reporting, Le Mars Community Schools has 303 employees serving as teachers, administration, and support staff.

*Facilities*

School	Address	Building Construction Date
Clark Elementary School	201 2nd Ave NW	1939

Franklin Elementary School	400 3rd Ave SE	1939
Kluckhohn Elementary School	1338 Central Ave SE	1974
Le Mars Middle School	977 3rd Ave SW	1972
Le Mars High School		
The Individualized Learning Center	940 Lincoln Street SW	1964
<b>Misc &amp; Auxiliary Bldgs</b>		
• Bus Barn	• Concession Stand	• Weight Room
• Admin Bldg	• Bathroom/Concession Bldg	• Car Garage - Kissinger
• Concession Stand	• Maintenance Bldg	• Car Garage - Le Mars

No record of incurred damages due to natural hazard incidents. No district structures are in the floodplain. There are not certified “Tornado Safe Rooms” within the district; however, each facility does have designated tornado refuge locations.

*Valuation of District Assets*

Buildings	\$	62,538,693
Total Personal Property	\$	5,396,718
Total property in the Open	\$	<u>389,404</u>
<b>total</b>	<b>\$</b>	<b><u>68,324,815</u></b>

*b. Participation*

A planning meeting was conducted via phone conference on May 3, 2019 with Superintendent Steve Webner in attendance. Addition information was provided by Sandy Downing, Business Manager.

*c. Capabilities*

The district states that they have no major concerns related to State Identified Natural Disasters as addressed in this plan.

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past

five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* No major changes have been made upon review of security procedures and equipment. Facilities do not have generator backup in place, but exit signs illuminate in the event of a power outage. No equipment has been added to aid in emergency response.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* No flood mitigation measures have been implemented, as none are necessary.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* School conducts natural hazard preparation through fire, tornado, and active shooter drills. Text and other tech-based alerts are connected to the district's internal WENS alerts. Tied into Alert Iowa, messages go directly through parent communications as activated through registration. Staff receives alerts at same time to ensure uniform receipt of info. System fully activated in 2018-2019 school year. Weather radios are in place at all district facilities. The City siren system serves all district facilities.

**Action 3.1.2:** Education on tree types and planting.

*Status:* A tree-specific curriculum is not in place, but it may be a component in FFA program.

**Action 4.2.1:** Identify, design, and develop storm shelters.

Status: Each building has identified tornado safe zones. No further action has been taken, nor planned.

d. *Risk Assessment*

*Contributing Factors*

The school district has not reported on any factors contributing to concerns related to natural hazards. Citywide flooding has been recurring, especially in 2019. However, school facilities have not suffered ill effects from those events.

*Priority Hazards*

The district did not identify priority hazards. Protocol is in place for late starts, early release, and cancelation due to weather or other emergency conditions.

**9. Maple Valley-Anthon-Oto**

a. *Profile*

At the time of the planning meeting, Maple Valley – Anthon Oto was in its second year with the addition of Charter Oak-Ute under a whole grade-sharing program. The elementary school in Charter Oak is not included in this information. No facility changes have taken place in Mapleton or Anthon. Ute, while served, does not host any district facilities.

*Students & Staffing*

2018-2019 Student Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	31	2	34	6	54	10	57
T-K	n/a	3	40	7	58	11	60
K	48	4	47	8	53	12	54
1	32	5	54	9	52	<b>total</b>	<b>674</b>

Staffing

Administration	11	Teachers	60	Support Staff	47
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*Facilities*

A current valuation was not provided.

Maple Valley-Anthon Oto High School	501 S 7th St, Mapleton
Mapleton Elementary School	
MVAO Middle School	110 W Division St, Anthon
Anthon Elementary	

b. *Participation*

A planning meeting was held on May 15, 2019 via conference call. Dr Steve Oberg, Superintendent, was in attendance.

c. *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security reviews and related equipment updates are constant. Protocol is in place for weather emergencies during athletic events held in the open. AEDs have been added on-site at school facilities, and key staff have been trained to use them. All lighting has an hour-long battery backup, enabling organized evacuation as necessary.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* Flooding as occurring in Anthon was unique to conditions at the time of a heavy rain spell and are not typical. No action has been taken on this item.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* School conducts natural hazard preparation through fire, tornado, and intruder drills. No specific efforts to increase awareness to the general public is in place.

**Action 3.1.2:** Education on tree types and planting.

*Status:* A tree-specific curriculum is not in place, nor is one being considered at this time.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Storm and tornado refuge locations are identified within facilities by signage, reinforced through semester drill procedures.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Weather radios are in place at school facilities. Warnings are issued via internal PA system in addition to respective city sirens as sounded.

#### d. *Risk Assessment*

##### *Contributing Factors*

Some flooding did occur at the Anthon facility, with water seepage under the door. Cause was more related to drainage during spring storms affecting level of runoff and non-existent absorption due to weather conditions during and preceding the flooding incident.

##### *Priority Hazards*

The planning team for MVAO Schools did not specify priority hazards, however, concern over another tornado and student safety during extreme weather was expressed.

## 10. Marcus-Meriden-Cleghorn and Remsen Union Districts

### a. Profile

The MMC and RU Districts collaborated in 2016 to form a Whole Grade Sharing Agreement between the Marcus Meriden Cleghorn (MMC) and Remsen Union (RU) Schools. Information as provided was sourced from both administrative offices overseeing the district. Valuation information was not provided. Facilities as listed represent those currently in operation. The elementary school in a new building and major renovations have been implemented at the high school.

#### *Students & Staffing*

Enrollment data was not provided by the district. Between the district's four (4) schools, 114 employees are in place including teachers, administration, and support staff.

#### *Facilities*

MMC & RU High School, Marcus	400 E. Fenton St, Marcus
MMC Marcus Elementary (Pk-4)	
MMC & RU Middle School (5-8), Remsen	511 Roosevelt Ave, Remsen
RU Remsen Elementary (Pk-4)	

The elementary school in Marcus is new construction. The high school had a major remodel and additional district renovations are planned for the next 5-7 years. An on-site daycare is not under district operation, but is housed within the Marcus facility. A valuation of facilities was not provided. School structures are not within the floodplain. Information on record of damages due to natural hazards is not available.

### b. Participation

A planning meeting was conducted via conference call on February 15, 2019 with Superintendent Dan Barkel and Business Manager Joe Mohning in attendance.



c. *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

**Status:** In 2018-2019 school year, district was working toward updating security plan as mandated by state of Iowa. Security plan includes lock down procedures and response plan; update expected to be implemented by 2020-2021. There is not an internal need identified. There is a response team within district, but currently there is a full reliance on sheriff's office and fire department.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan

**Status:** The district has an active long-term facility plan incorporating standard building code for public schools.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Status:** School conducts natural hazard preparation through fire, tornado, and active shooter drills. No obvious actions toward distribution of information has been taken in past. Notifications are possible via texts, website, and notes from school.

**Action 3.1.2:** Education on tree types and planting.

**Status:** A tree-specific curriculum is not in place, nor is one being considered at this time. Plantings on school property are included as an element of planning.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Each building has identified tornado safe zones. For bused students, evacuation is practiced. In emergency event such as tornado, drivers are to use best judgement.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Weather radios are not in place at the schools. The district has requested to make this an action item. Text and other tech-based alerts, in addition to the City siren system, are available resources.

d. *Risk Assessment*

*Contributing Factors*

Facilities are stretched between two (2) communities and serving several more communities through the whole grade sharing system. Facilities are not designated for public use as a refuge; however, shelter in place procedure may apply to students. Extreme weather is always a consideration when students (and staff) are commuting from other cities and rural communities. District facilities are noted as being outside of floodplain.

*Priority Hazards*

No hazards stand out to district administration as being more of a concern than others are. However, the following are most prominent in occurrence.

- Thunderstorm w/Hail & Lightning
- Tornado/Windstorm
- Severe Winter Storm

## 11. Odebolt Arthur Battle Creek Ida Grove

### a. Profile

OABCIG numbers reflect student populations and facilities in all locations for the district. Information for the Odebolt facility is included even though it is outside the planning region.

#### Students & Staffing

##### 2018-2019 Student enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	70	2	55	6	77	10	80
T-K	73	3	73	7	75	11	86
K		4	69	8	78	12	62
1	58	5	65	9	66	<b>total</b>	<b>987</b>

##### 2019-2020 Staffing

Staff/Admin/Faculty & Seasonal Employees	215
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#### Facilities

School	Address	RC Valuation
OABCIG High School	900 John Montgomery Dr, Ida Grove	\$ 12,653,298
BCIG Elementary School	403 Barnes St, Ida Grove	\$ 12,296,054
Western Iowa Tech	801 2nd St, Ida Grove	\$ 889,706
OABCIG Middle School	600 S. Maple, Odebolt	\$ 17,287,624
OA Elementary School		
Ballfields/Softball Complex	2688 Dodge Ave #2676, Battle Creek	\$ 83,003
<b>Total</b>		<b>\$ 43,209,685</b>

### b. Participation

Mitigation planning discussion was conducted via email communications, with Business Manager Kathy Leonard participating. Most information was gathered between October 4<sup>th</sup> and 6<sup>th</sup>, 2019.

c. *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.2:** Mitigate high-risk to flooding property.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

Status: The school reported that no mitigation-specific actions were implemented at the district. Discussion regarding addition of or modifications to include a tornado-safe shelter within facilities is ongoing within the district. Standard safety procedures are in place with secured entry controls and camera monitoring.

d. *Risk Assessment*

*Contributing Factors*

Service area of OABCIG Schools includes several communities in two counties.

*Priority Hazards*

No hazards were identified as priority concerns for the district, though inclement weather and transportation of students is always a concern.

## 12. River Valley

### a. Profile

#### Students & Staffing

##### 2018-2019 Student Enrollment

Gr	Enrolled	Gr	Enrolled	Gr	Enrolled	Gr	Enrolled
PreK	28	2	24	6	27	10	37
T-K	n/a	3	31	7	26	11	25
K	30	4	24	8	34	12	36
1	33	5	29	9	31	<b>total</b>	<b>387</b>

Staff numbers were not provided.

#### Facilities

Elementary Primary School	100 S 5th St, Washta
Junior/Senior High School	916 Hackberry St, Correctionville
Bus Barn	Cushing

Valuation not available. The new gymnasium was added to the facility in Correctionville, and some of the functions in Washta were repurposed.

### b. Participation

A planning meeting was held on May 7, 2019 with Superintendent Ken Slater participating.

### c. Capabilities

River Valley Community Schools have a stringent safety plan in place.

#### Review of Actions Taken

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security procedures and equipment are in place and upgraded as needed. There is a backup system for lighting only in the event of power outage. The district is interested in funded CPR/First aid training.

**Action 2.1.4:** Implement projects identified in the Capital Improvement Plan

*Status:* The school board makes decisions related to expenditures. Projects are brought before the board on a case-by-case basis.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* School conducts natural hazard preparation through fire, tornado, and intruder drills. Text alerts are issued for closing but not for routine or non-urgent information.

**Action 3.1.2:** Education on tree types and planting.

*Status:* A tree-specific curriculum is not in place, nor is one being considered at this time.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Interior shelter locations are designated for students/staff.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

Status: No weather radios are in place at the Correctionville location, Washta is not known. The schools are connected to the County Communications Center for WENS issued warnings. City sirens in Correctionville and Washta are audible from respective school grounds.

d. *Risk Assessment*

*Contributing Factors*

There was some perimeter flooding in 2019 in Washta, but no facility concerns.

*Priority Hazards*

- Tornado/Windstorm
- Flood
- Transportation Incident – In regard to student/staff travel to and from school.
- Terrorism – active shooter/intruder concerns are significant for staff and students.

**13. Sergeant Bluff-Luton**

a. *Profile*

The Sergeant Bluff-Luton School District has made substantial investments in property improvements, most recently within provision for athletics. Facility improvements and expansions are needed to accommodate its growing enrollment. With the exception of some soccer programs as hosted at the city rec center, all sports facilities are adjacent to one of the school buildings.

*Students & Staffing*

Enrollment numbers by grade were not specified during the planning meeting and subsequent email communications. Total enrollment was approximately 1,700 students for 2018-2019 school year. For the 2019-2020 school year, the district employed approximately 215 administrative staff, faculty, and teachers.

*Facilities*

School	Address	Bldg RC Valuation
SB-L Senior High School	708 Warrior Rd, Sergeant Bluff	\$ 40,688,276

SB-L Middle School	208 Port Neal Rd, Sergeant Bluff	\$ 30,000,000
SB-L Elementary School	201 Port Neal Rd, Sergeant Bluff	\$ 30,000,000
SB-L Primary School	206 South D St, Sergeant Bluff	\$ 30,000,000
Bus Barn	101 Bluffs Blvd	\$ 3,625,294

A new track and turf for the football field accounted for a \$1.8M investment. Other assets as recognized based on replacement cost are included in the total summation provided.

#### 2019 Valuation

Building	\$ 134313570
Personal Property	\$ 28516413
Property in the Open	\$ <u>1914611</u>
<b>Total RC Valuation</b>	<b>\$ <u>164,744,594</u></b>

#### b. *Participation*

A planning meeting was held on June 3, 2019 via phone conference with Business Manager Denise Patterson and Superintendent Rod Earleywine in attendance.

#### c. *Capabilities*

The district did submit an NOI for funds through FEMAs hazard mitigation programs to address flood and drainage concerns. Some roof repairs were necessary from hail and high wind incidents occurring in recent years. The district has been in discussion with the City of Sergeant Bluff to address drainage and flooding issues affecting school properties but necessarily under control of the district. Roof repairs were implemented as resulting from recent hail storms.

#### *Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.



**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* The district make significant upgrades in its security systems within the past five years, and is planning additional camera and double-buzz entry systems in the near future. Additional updates/upgrades are being implemented as required through newer legislation as stated in the Iowa Code. The district is interested in adding a generator at least one, preferably more, school facility.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* The Middle School suffered \$180,000-200,000 in damages occurred in recent events, however, mitigation measures are needed outside of the school's jurisdiction. The district has been in discussion with the City to ensure that drainage ditches do not have repetitive blockages/backups, causing damage to school properties.

**Action 2.1.4:** Implement projects identified in the district's Capital Improvement Plan.

*Status:* Facility maintenance is scheduled, with necessary action taken as needed. School currently seeking bond approval to replace the Primary School. Roof repairs as previously mentioned were among those immediately necessary to prevent further damage.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* School conducts natural hazard preparation through fire, and tornado drills. Due to threat of intruders, the school is actively addressing terrorism through active shooter drills. Parents/guardians/students have the option of signing up for text/email alerts during the annual student registration process.

**Action 3.1.2:** Education on tree types and planting.

*Status:* A tree-specific curriculum is not in place, nor is one being considered at this time.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* The newest buildings – the Elementary and Middle schools, have tornado safe spaces, though they are not FEMA classified structures. The Elementary School serves as refuge during tornado watches for residents of the nearby trailer court.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Weather radios are in place at the schools and have been for an extended period of time. The district has an internal warning system in place and benefits from warnings through the city's siren, audible out of doors at all facilities.

d. *Risk Assessment*

*Contributing Factors*

While the Sergeant Bluff-Luton School District is relatively small in its service area, there is a rather high concentration of open-enrollment students commuting to the district. Safe transportation to all school buildings is an on-going concern, as many residents must cross highway 75 to access the buildings. Improvements have been implemented by the city by way of addition of a 4-way stop connecting the trail to High School property.

*Priority Hazards*

- Tornado
- Flood
- Terrorism (Active Shooter)

## 14. Sioux City Community School District

### a. Profile

#### Students & Staffing

The Sioux City Community School District hosts a preschool and early childhood development program through Stella Sanford Center and Head Start. However, number for preschool are not included in student counts for the district.

#### 2018-2019 Student Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	n/a	2	1077	6	1135	10	1095
T-K	126	3	1054	7	1097	11	1047
K	1119	4	1152	8	1072	12	1081
1	1071	5	1178	9	1134	<b>total</b>	<b>14,438</b>

#### Staffing

The district employs roughly 1895 administrative and support staff, faculty, and teachers.

#### Facilities

School	Address	Bldg Ins. Valuation
East High School	3200 S Cypress St	\$ 42,290,939
North High School	4200 Cheyenne Blvd	\$ 42,440,376
West High School	2001 Casselman St	\$ 42,447,529
East Middle School	5401 Lorraine Ave	\$ 35,274,129
North Middle School	2101 Outer Dr N	\$ 33,012,485
West Middle School	3301 W 19th St	\$ 33,151,540
Bryant Elementary School	3040 Jones St	*\$ 17,000,000
Clark Early Childhood School	4315 Hamilton Blvd	\$ 4,016,745
Crescent Park Elementary School	1114 W. 27th St	\$ 4,692,000
<i>former Hunt Elem Bldg pre demo*</i>	615 20th St	**\$ 4,080,000
Irving Elementary School	901 Floyd Blvd	\$ 12,981,123
Irving Preschool	7001 Iowa St	\$ 2,605,883
Leeds Elementary School	3919 Jefferson St	\$ 17,349,198
Liberty Elementary School	1623 Rebecca St	\$ 14,150,674

Lincoln Elementary School	115 Midvale Ave	\$ 3,433,280
Loess Hills Elementary	1717 Casselman St	\$ 11,573,409
Morningside Elementary	3601 Bushnell Ave	\$ 13,980,242
Nodland Elementary School	3300 S Cypress	\$ 3,919,253
Perry Creek Elementary School	3501 Country Club Blvd	\$ 14,484,000
Riverside Elementary School	2303 Riverside Blvd	\$ 7,682,570
Spalding Park Elementary School	4101 Stone Ave	\$ 15,887,856
Sunnyside Elementary School	2700 S. Maple St	\$ 2,881,810
Unity Elementary School	1901 Unity Ave	\$ 13,369,340
<i>Accessory &amp; Misc Buildings</i>		
Administrative offices; Career Academy	627 4th St	\$ 16,874,533
Bus Barn; Main Admin; O&M Bldg	2620 28th St	\$ 4,273,704
Fairview School House	3601 Country Club Blvd	\$ 51,000
Food Services/Auto Career Center	3000 N US HWY 75	\$ 4,940,383
SCCSD High Schools Stadium & Related	S Paxton @ Peters Ave	\$ 5,290,573
Misc Buildings		\$ 433,500

\*Bryant Elementary was under construction at time of planning meeting. Total shows planned value upon completion

\*\* Hunt Elementary was being deconstructed at time of planning meeting. Value is as assessed for 2018-2019 school year.

Total valuation as provided is as determined by the district policy expiring July 2019. Totals may include buildings no longer in use or in possession of the district at the time of Plan submission. Valuation total does not include the completed Bryant Elementary facility (amount shown in table above). Values are for replacement cost and are intended as beginning reference point when determining mitigation actions.

2019 Valuation of District Assets

Building	\$	407,568,074
Personal Property	\$	39,447,460
Property in the Open	\$	<u>9,718,828</u>
<b>Total</b>	<b>\$</b>	<b><u>456,734,362</u></b>

b. *Participation*

A planning meeting was held on May 10, 2019 at West Middle School with Anthony Gaul, Multi-Occupations Coordinator and Brian Fahrendholz, Director of Operations in attendance.

c. *Capabilities*

The district has undergone many changes that were initiated during the development of the 2014 Plan. Elementary schools are being replaced with new or entirely renovated structures. With these developments, some are being combined (Loess Hills is hosting students formerly in Smith, Roosevelt, and Emerson Schools) and others are separating out class levels (Perry Creek – 1<sup>st</sup> through 5<sup>th</sup> grades, and Clark Early Childhood – PreK, T-K, & K). With each new facility, significant steps are being taken to better ensure the safety of students. There are only a few remaining elementary schools without the benefit of air conditioning. Measures are in place to allow early dismissal for affected students during high heat incidents.

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.4:** Implement projects identified in the district's Capital Improvement Plan.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

**Status:** With new facilities serving students, several security upgrades have been implemented. Cameras and buzz-in entry are standard and have been in place for several years. New buildings, sports facilities, and overall improvements are all governed through the district CIP. Security measures are specific to mitigation. AEDs are in place at each facility.

Early outs for extreme heat conditions are announced as needed. Backup generators are in place in new buildings.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* City projects included improvements at the Perry Creek Bridge, mitigating blockage issues that previously affected district facilities. Drainage is given full consideration for all new buildings.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* Awareness activities are geared toward the student body, and not necessarily for the general public. School conducts natural hazard preparation through fire and tornado drills and intruder drills are conducted to mitigate potential for active shooter situations.

**Action 3.1.2:** Education on tree types and planting.

*Status:* Biology and Environmental Sciences include some education on tree types and plantings at the high school, and to a lesser degree, middle school levels. A tree-specific curriculum is not in place.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Each facility includes designated refuge locations for the event of a tornado.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Weather radios are in place and two-way radio communications are established between schools, transportation network, and meal services, connecting the district to the County Communications Center. City sirens at varying locations are audible to students/staff when outside on school properties. Internal alerts are sounded accordingly.

d. *Risk Assessment*

*Contributing Factors*

The district is the largest in the Region, accommodating students even beyond the regional planning boundaries for special needs accommodations. All facilities have designated refuge locations for tornado, some with deliberately fortified safe rooms.

*Priority Hazards*

- Tornado/Windstorm
- Thunderstorm w/Hail & Lightning
- Severe Winter Storm

Additional emphasis is placed on relative concerns for Flood and Terrorism. Flood has not been an impact directly on facilities. However, property in the open as used for athletics and other scheduled activities is compromised when used during and after flood conditions. Flood is also a factor in safe transport of students to/from school.

Terrorism is an ongoing stress point for students and staff, as well as their families.

**15. West Monona**

a. *Profile*

West Monona Community School District serves students from preschool through high school. Two facilities in Onawa serve all grade levels with students primarily from the cities of Onawa, Turin, and Blencoe.

*Students & Staffing*

2018-2019 Student Enrollment

Elementary	297	High School	209
Middle School	170	<b>Total</b>	<b>676</b>

Staffing

Administration	3	Support Staff	59
Teachers	58	<b>Total</b>	<b>120</b>

Facilities

School	Address	Valuation
West Monona Jr/Sr High	1314 15th St, Onawa	\$ 19,242,669
West Monona Elementary	611 4th St, Onawa	\$ 14,338,462

2019 District Valuation of Assets

Building RC	\$	30,261,023
Personal Property RC	\$	2,054,333
Property in the Open RC	\$	<u>1,237,928</u>
<b>Total</b>	<b>\$</b>	<b><u>33,553,284</u></b>

b. *Participation*

Mitigation plan updates were provided via email communications with Superintendent Julie Trepas October 4<sup>th</sup> - 10<sup>th</sup>, 2019.

c. *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.2:** Mitigate high-risk to flooding property.

**Action 2.1.4:** Implement projects identified in the district's Capital Improvement Plan

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.



*Status:* The district reported that minimal mitigation-specific actions were taken within the past several years. The district has moved its digital files to a cloud system so they can be retrieved in the event of fire, tornado, or other event where the building may suffer severe damages. Future plans include moving all paper files to a digital system. Security measures and related equipment as in place are within guidelines as set forth by the state. Drills are scheduled throughout each semester as required.

d. *Risk Assessment*

*Contributing Factors*

BY initiating off site storage of digital files, the district is demonstrating cognizant actions in potential for disaster. The State has been proactive in raising security and safety standards for school properties, and West Monona is maintaining compliance. The grounds have been fortunate to not experience ill effects of extreme weather patterns, and considering the extent of damages occurred in other locations, the district is confident in their current capacity for resilience.

*Priority Hazards*

Priority hazards were not identified by the district. They are mindful of the impact of extreme temperatures and severe winter weather in determining class and activities cancelations.

**16. Westwood**

a. *Profile*

Westwood Community School District operates out of a single facility in Sloan. The district provides elementary education for preschool through 3<sup>rd</sup> grade, and secondary education 4<sup>th</sup> grade through high school.

*Students & Staffing*

2018-2019 Student Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	47	2	44	6	52	10	39
T-K	n/a	3	42	7	48	11	45

K	59	4	32	8	44	12	42
1	32	5	52	9	49	<b>total</b>	<b>627</b>

2019-2020 Staffing

Administration	3	Teachers	50	Staff	51
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*Facilities*

Building Purpose	Address	Valuation
Westwood Schools; Rec & Other Facilities	1000 Rebel Way, Sloan	\$ 24,839,503
Bus Barn & Storage	317 8 <sup>th</sup> St @ Beall St	\$ 229,153

2019 Valuation of District Assets

Buildings	\$	25,068,656
Personal Property	\$	4,954,410
Property in the Open	\$	<u>590,594</u>
<b>Total</b>	<b>\$</b>	<b><u>30,613,660</u></b>

b. *Participation*

A planning meeting was held on May 7, 2019 via conference call with Superintendent Jay Lutt participating. Additional information was collected through an ongoing email exchange.

c. *Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 4.1.1:** Additional equipment for emergency response.

*NOTE: Above actions combined due to mutual impact and/or nature of intent of actions and strategies as listed.*

*Status:* Security measures in place are fairly standardized based on state requirements. No generator back up is in place; however, the district is interested in having one should funds become available. The school does serve as a refuge location as needed, as implemented in March 2019 during the evacuation of nearby City of Hornick.

**Action 2.1.2:** Mitigate high-risk to flooding property.

*Status:* No immediate concerns regarding flooding and relative impact on district facilities.

**Action 2.1.4:** Implement projects identified in the district's Capital Improvement Plan

*Status:* Projects are identified on a case-by-case basis, with some mitigation concerns incorporated into projects when applicable. No recent collaborative projects have been completed with the City and/or County.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

*Status:* School conducts natural hazard preparation through fire, tornado, and intruder drills. Communications are routinely sent to families via email and newsletter and sometimes may include preparedness information.

**Action 3.1.2:** Education on tree types and planting.

*Status:* A tree-specific curriculum is not in place in place; however, the district is interested in incorporating a curriculum-based program.

**Action 4.2.1:** Identify, design, and develop storm shelters.

*Status:* Designated refuge locations are identified within the school facility. Additional facilities are not currently being considered.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*NOTE: Above actions combined due to nature of intent of actions and strategies as listed.*

*Status:* Weather radios are onsite at the school. The City warning siren is intended to serve the school as well. However, wind affects audibility of siren and may not serve as effectively as intended. The school would benefit from an additional siren on the south end of town.

d. *Risk Assessment*

*Contributing Factors*

The district noted that severe weather in general, whether snow or rain, are a significant concern for student safety, particularly in terms of transporting to and from school. School buses travel along secondary and unmaintained roadways that may suffer more consequence from flood and snow than in-town roads.

*Priority Hazards*

- Tornado/Windstorm
- Thunderstorm w/Hail & Lightning
- Flood (most relevant to resulting transportation barriers)

**17. Whiting Community School District**

a. *Profile*

Located in Whiting, the school district provides education for Hornick, Onawa, Sloan, and Castana families in addition to those from Whiting. All grades are housed on a single campus.

*Students & Staffing*

2018-2019 Student Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	20	2	17	6	15	10	18
T-K	n/a	3	15	7	14	11	12
K	15	4	16	8	20	12	17
1	16	5	8	9	13	<b>total</b>	<b>216</b>

*Staffing*

The district employs approximately 47 staff, administration, and teachers.

*Facilities*

School	Address	Valuation
Whiting Schools - PK-12	600-620 West St, Whiting	\$ 11,014,000
Bus Barn & Other Misc Bldgs		\$ 3,151,211

2019 Valuation of District Assets

Buildings	\$ 14,165,211
Personal Property	\$ 579,013
Property in the Open	\$ <u>269,694</u>
<b>Total</b>	<b>\$ <u>15,013,918</u></b>

*b. Participation*

Planning information was communicated through phone calls beginning May 2019 and continued via email exchanges in October 2019 with contributions from Superintendent Randy Collins and School Board Secretary Lori West.

*c. Community Capabilities*

*Review of Actions Taken*

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.2:** Mitigate high-risk to flooding property.

**Action 2.1.4:** Implement projects identified in the district’s Capital Improvement Plan

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*Status:* The district reported that no mitigation-specific actions were implemented in the planning period reflected in this Plan. Security measures and related equipment are compliant with those as required through state mandates including controlled entry and drills, and designated refuge locations for non-evacuation emergencies.

d. *Risk Assessment*

*Contributing Factors*

Whiting serves a large area extending to corporate boundaries of the cities it serves. Transportation is a particular concern when the district determines school closures, late starts, and early dismissals. Overall concerns are consistent with those of the region.

*Priority Hazards*

- Tornado/Windstorm
- Thunderstorms w/Hail & Lightning
- Severe Winter Storm

**18. Woodbury Central**

a. *Profile*

Woodbury Central provides education for transitional kindergarten through high school. All classes are provided on a single property. School data accounts for 35 preschool students, not included in district totals. Of the 535 students in the 2018-2019 school year, 95 are from out of town.

*Students & Staffing*

2018-2019 Student Enrollment

Grade	Enrolled	Grade	Enrolled	Grade	Enrolled	Grade	Enrolled
PreK	35	2	34	6	48	10	46
T-K	14	3	47	7	47	11	42
K	31	4	35	8	34	12	45
1	31	5	41	9	40	<b>total</b>	<b>535</b>

Staffing

The district employs approximately 75 support staff, administration, and teachers.

Facilities

Facility valuation is based on coverage as insured and may not reflect the full replacement cost.

School	Address	Valuation
Woodbury Central Schools & Related Bldgs/Facilities	408 S 4th St, Merville	\$ 34,139,507

2019 Valuation of District Assets

Personal Property	\$	2,713,462
Property in the Open	\$	<u>1,294,507</u>
<b>Total</b>	<b>\$</b>	<b><u>38,147,476</u></b>

b. Participation

A planning meeting was held on via phone conference on June 24, 2019 with Business Manager Christen Howrey in attendance. Additional information was collected through email.

c. Capabilities

Review of Actions Taken

Following is a status update in response to actions and strategies as presented in the 2014 Plan. Identified are measures in place, as well as new implementations effective in the past five (5) years. All actions are considered closed unless noted here and included in the Region listing of actions, strategies, and projects as provided.

**Action 2.1.1:** Review and update security procedures and equipment at critical facilities in the community.

**Action 2.1.2:** Mitigate high-risk to flooding property.

**Action 3.1.1:** Increase public awareness of vulnerability to hazards / education.

**Action 3.1.2:** Education on tree types and planting.

**Action 4.1.1:** Additional equipment for emergency response.

**Action 4.2.1:** Identify, design, and develop storm shelters.

**Action 4.3.6:** Purchase and issue weather radios for schools and critical facilities.

**Action 4.3.7:** Tornado warning system.

*Status:* The district reported that no major work has been implemented to address mitigation. Some repairs were made to the bleachers in response to some severe wind damage. All security measures and related equipment are in place, in compliance with state requirements. The school is designated as a refuge location when necessary. Drills for fire and tornado emergencies, as well as intruder alerts, are practiced routinely, also as required by the state. No further detail on mitigation actions and strategies was provided.

d. *Risk Assessment*

*Contributing Factors*

District concerns regarding weather extremes are typical of other jurisdictions in the area. Flooding has complicated transport but not buildings were reported as affected. Severe Winter Storm has obvious impact on attendance and safe transport, which is mitigated on case-by-case basis with closure and/or late start.

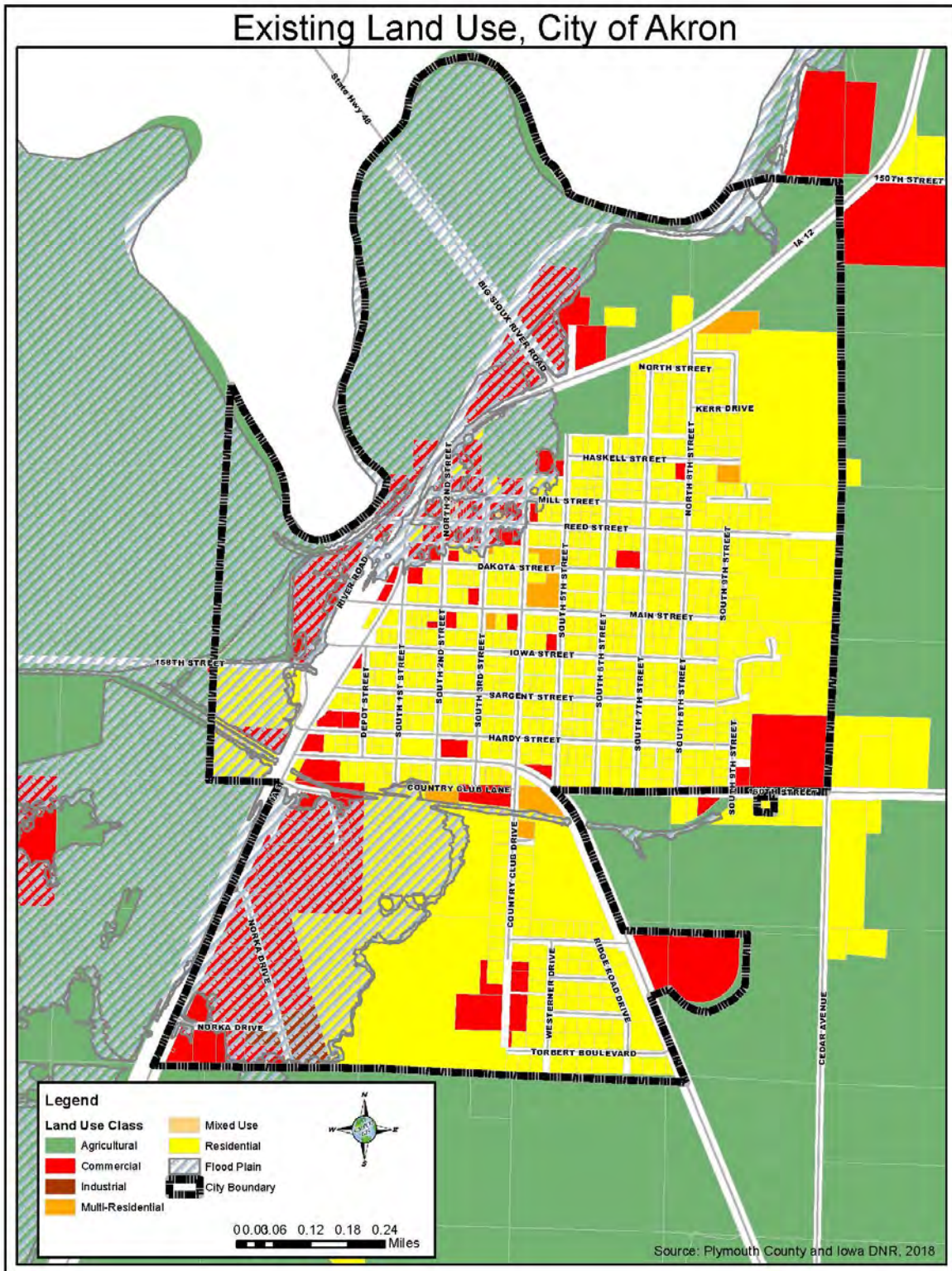
*Priority Hazards*

The district did not identify specific priority hazards, although concerns are reflective of those as indicated by the City of Menville.

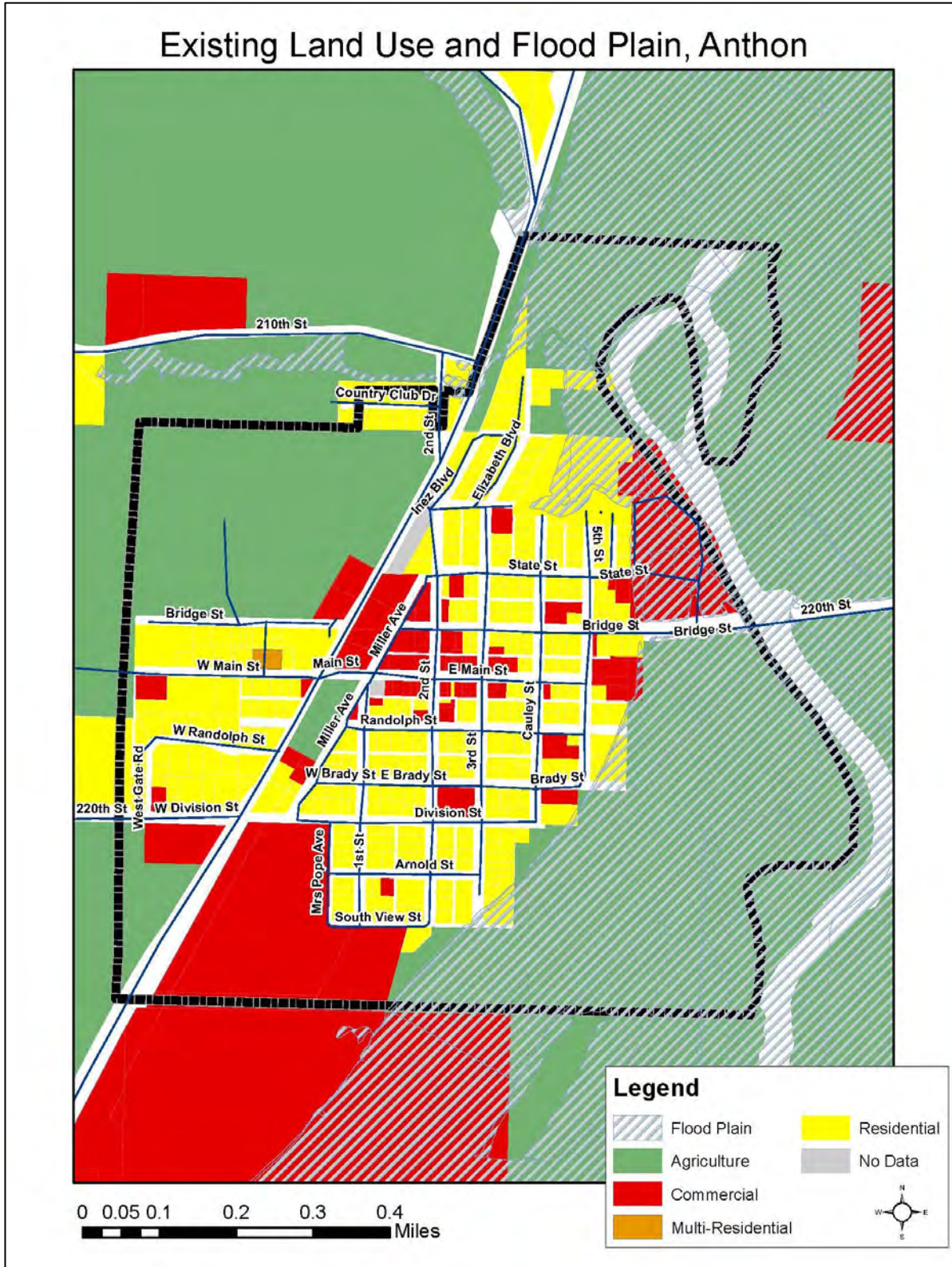


## VI. Maps

*Land Use & Flood Plain (alphabetically by Community)*

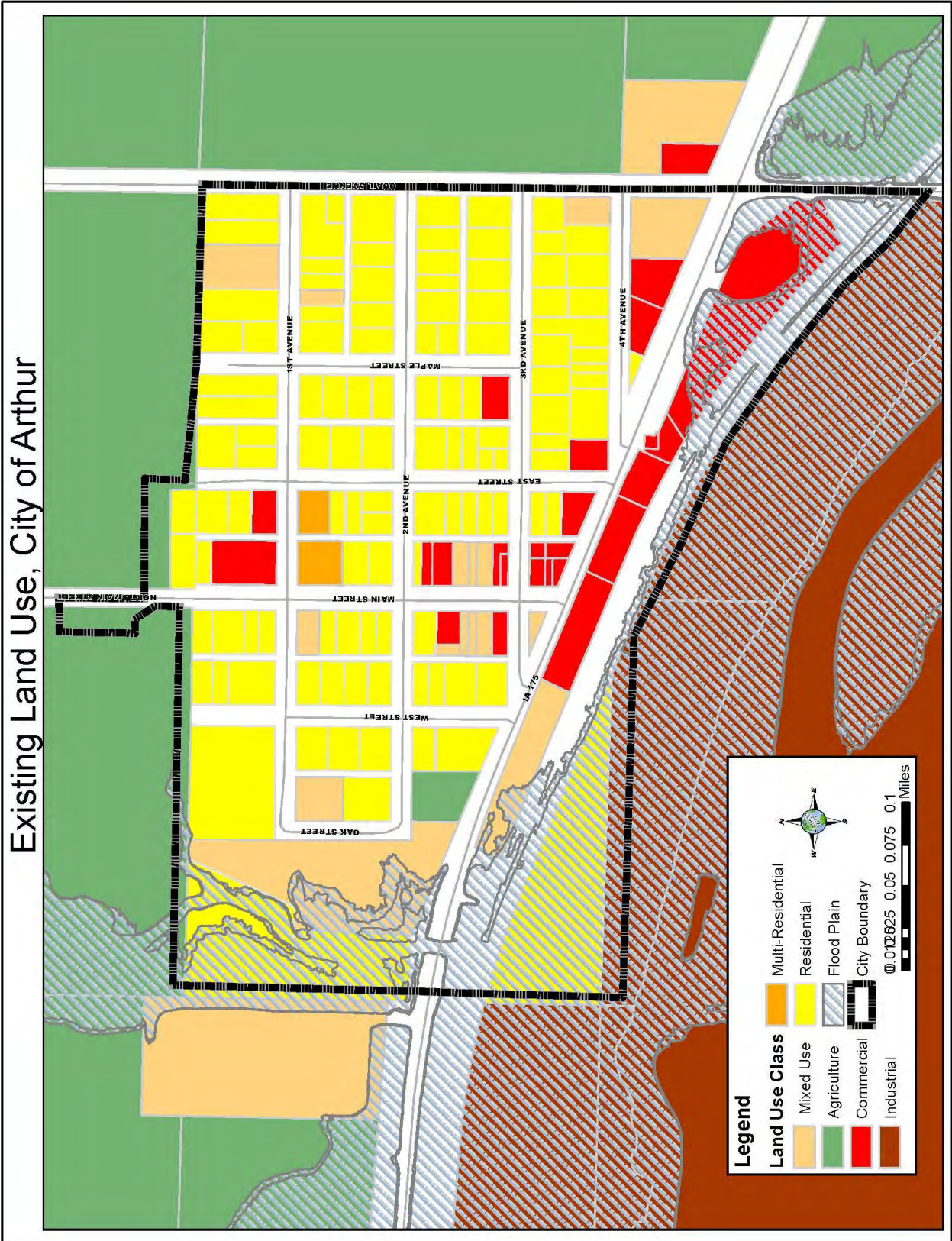






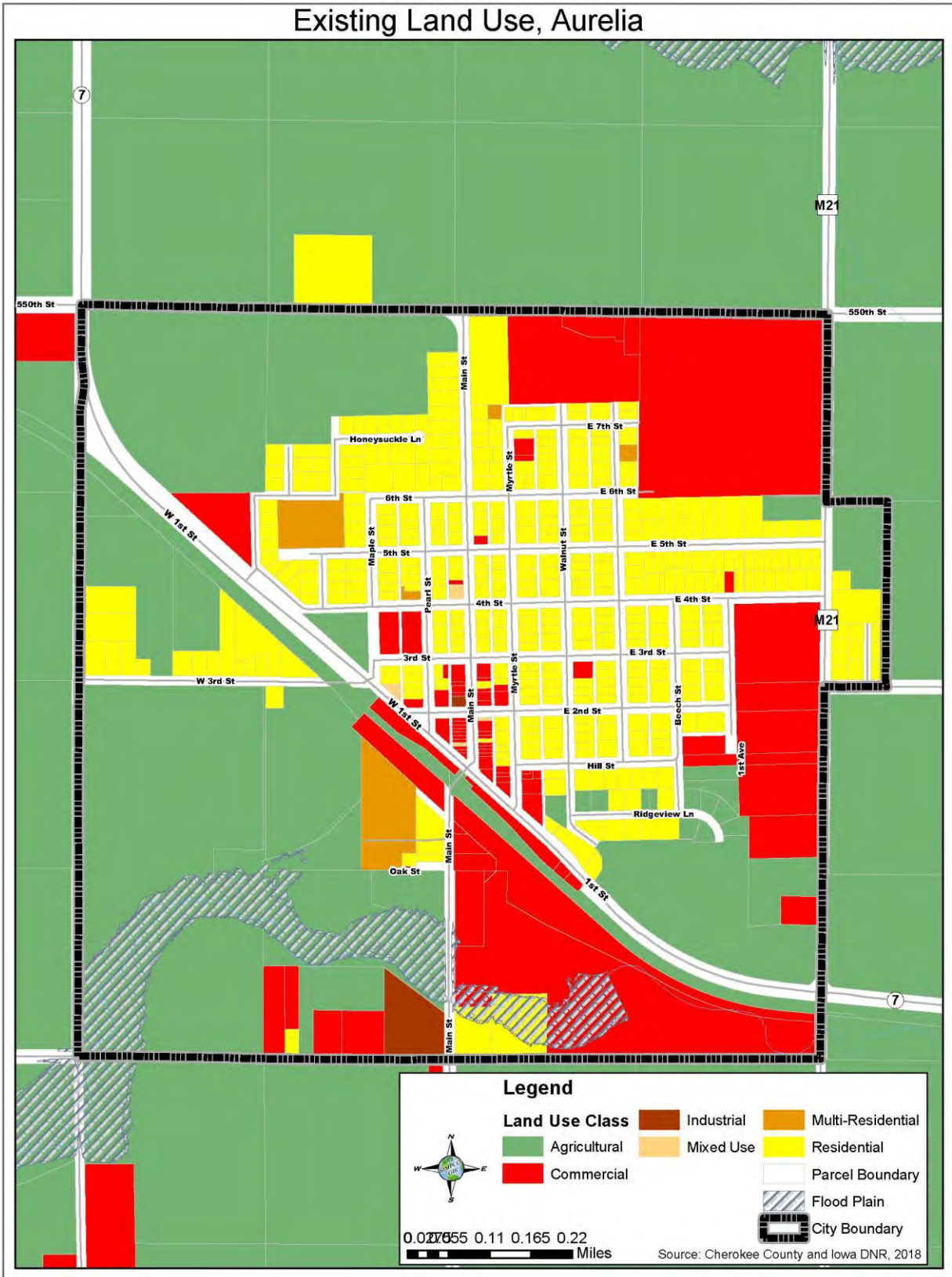


# Existing Land Use, City of Arthur

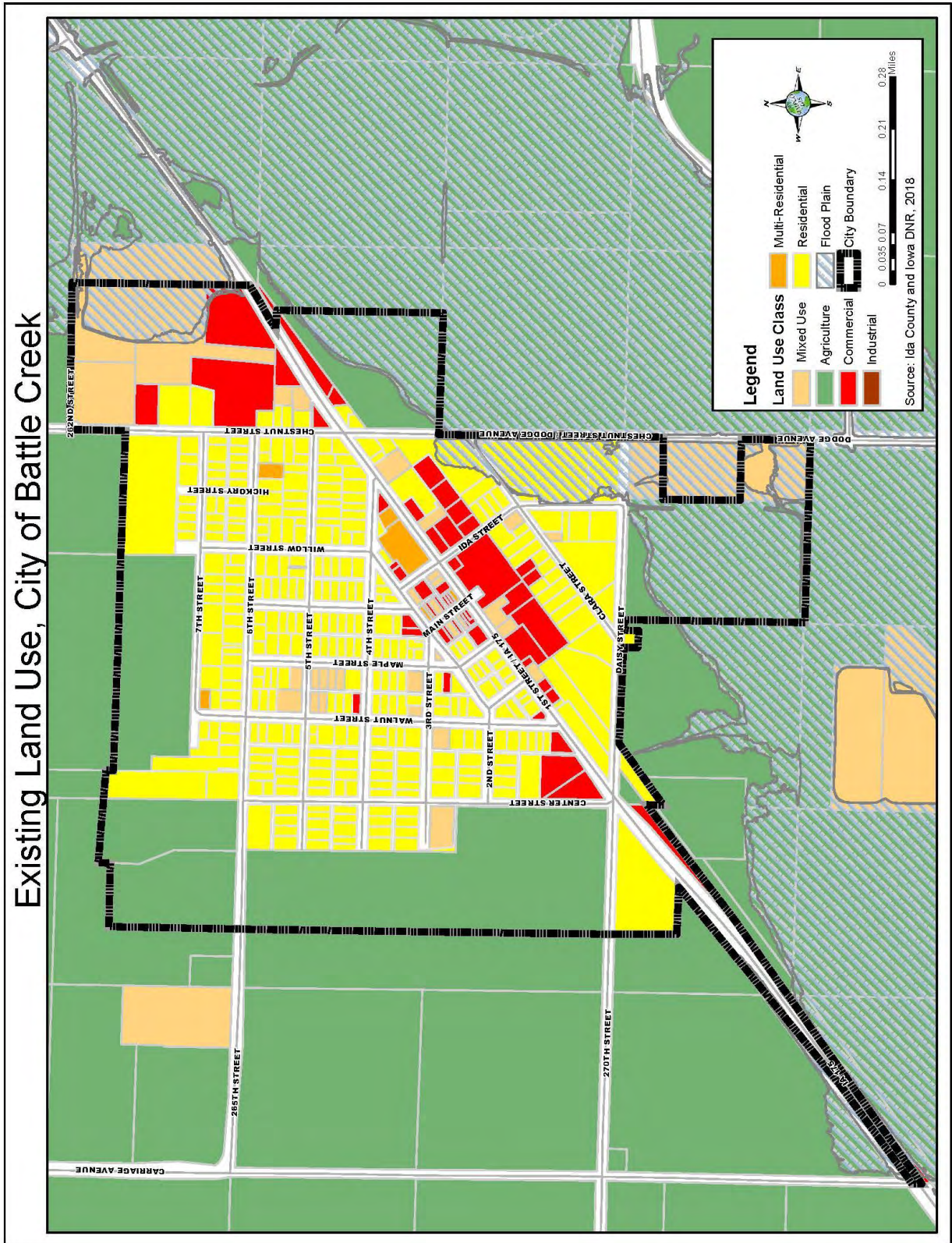




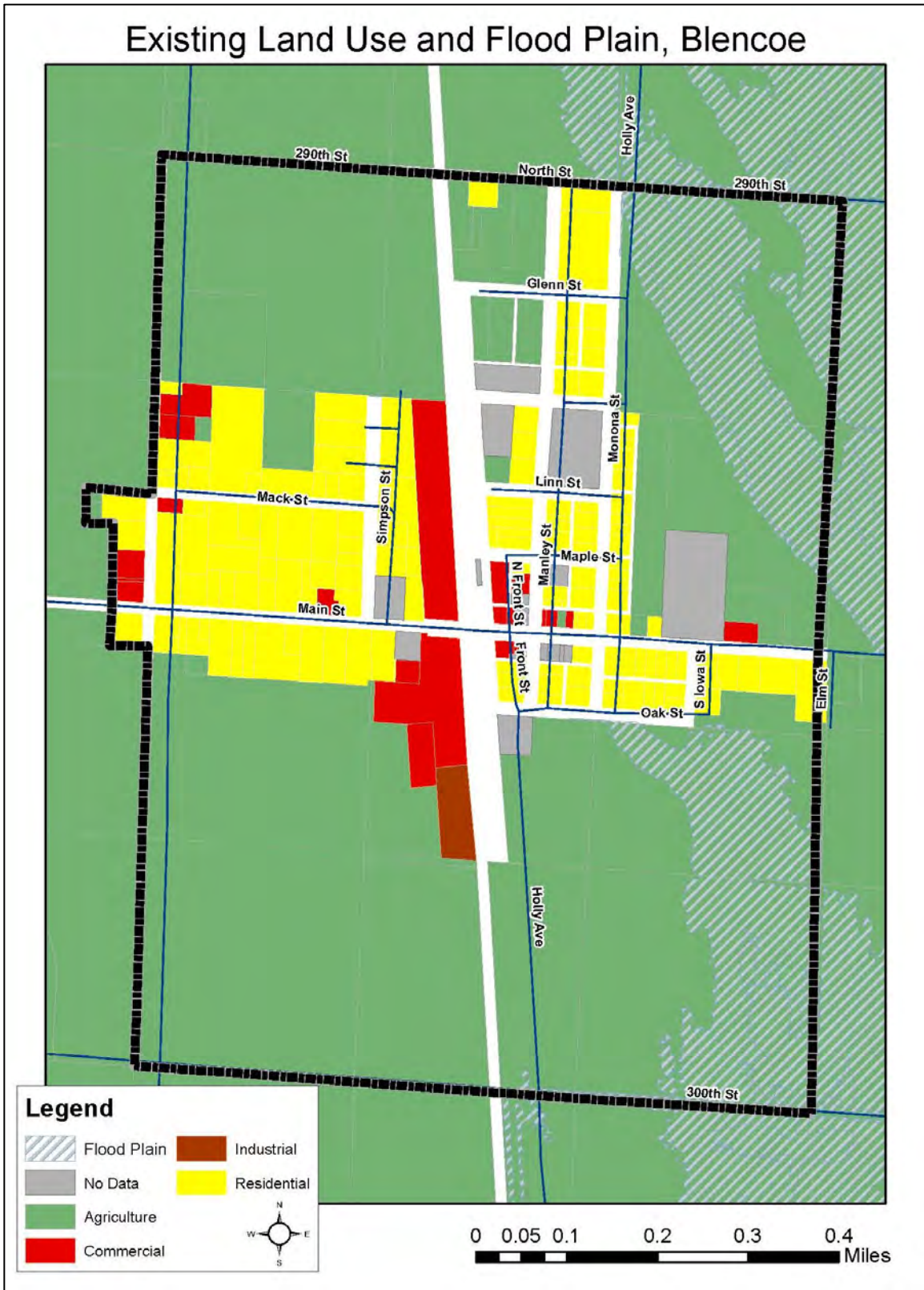
### Existing Land Use, Aurelia

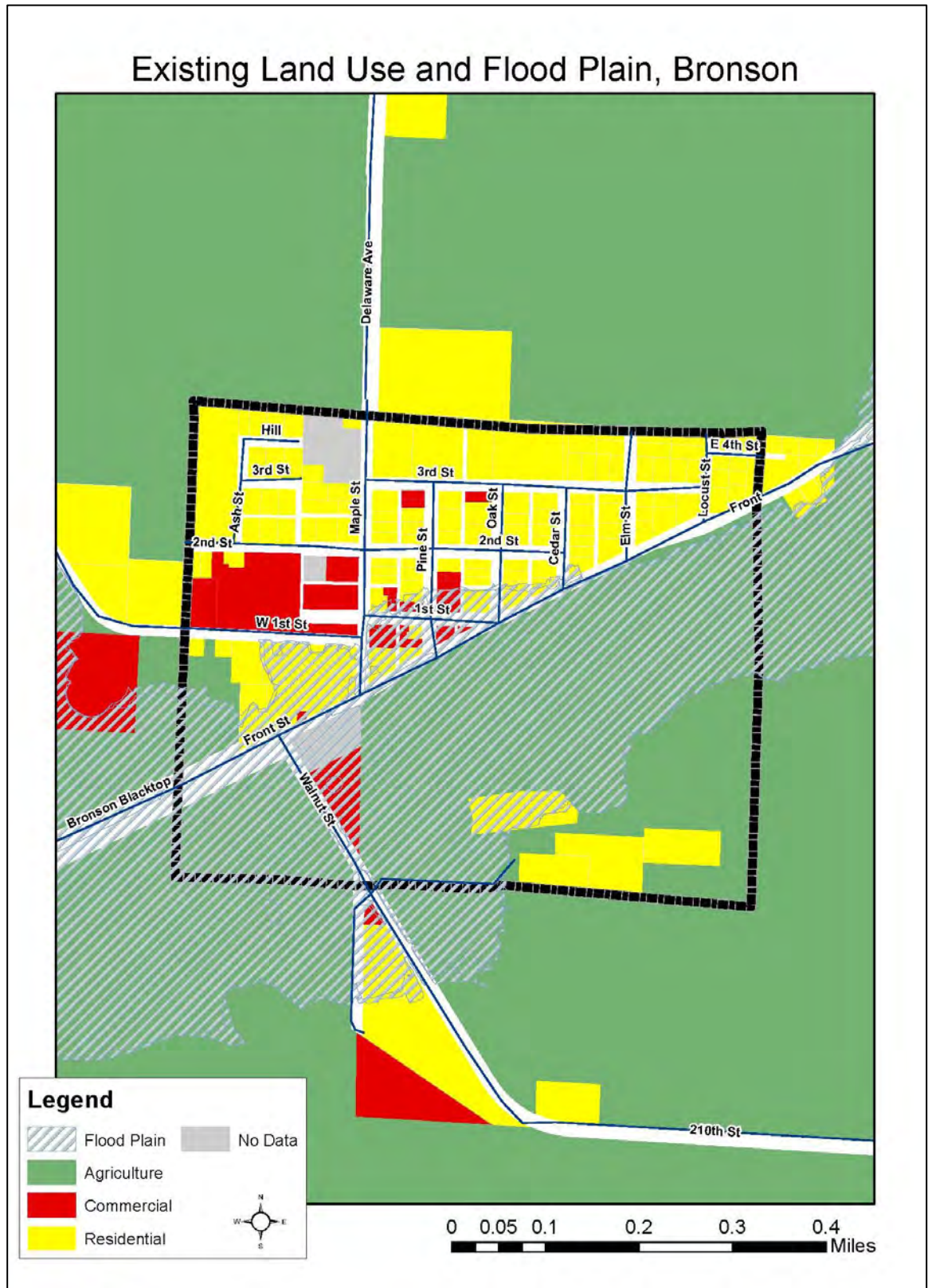




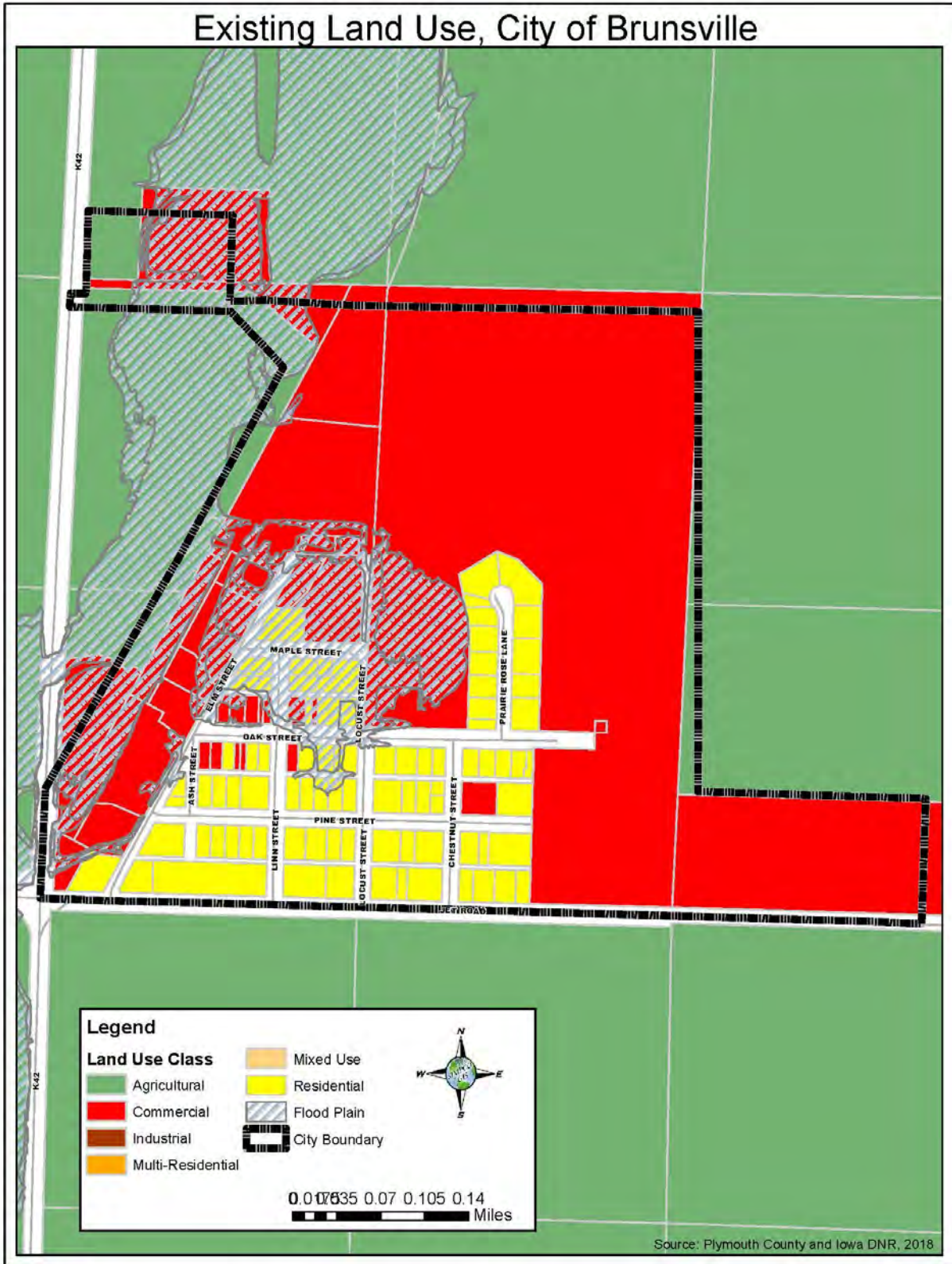




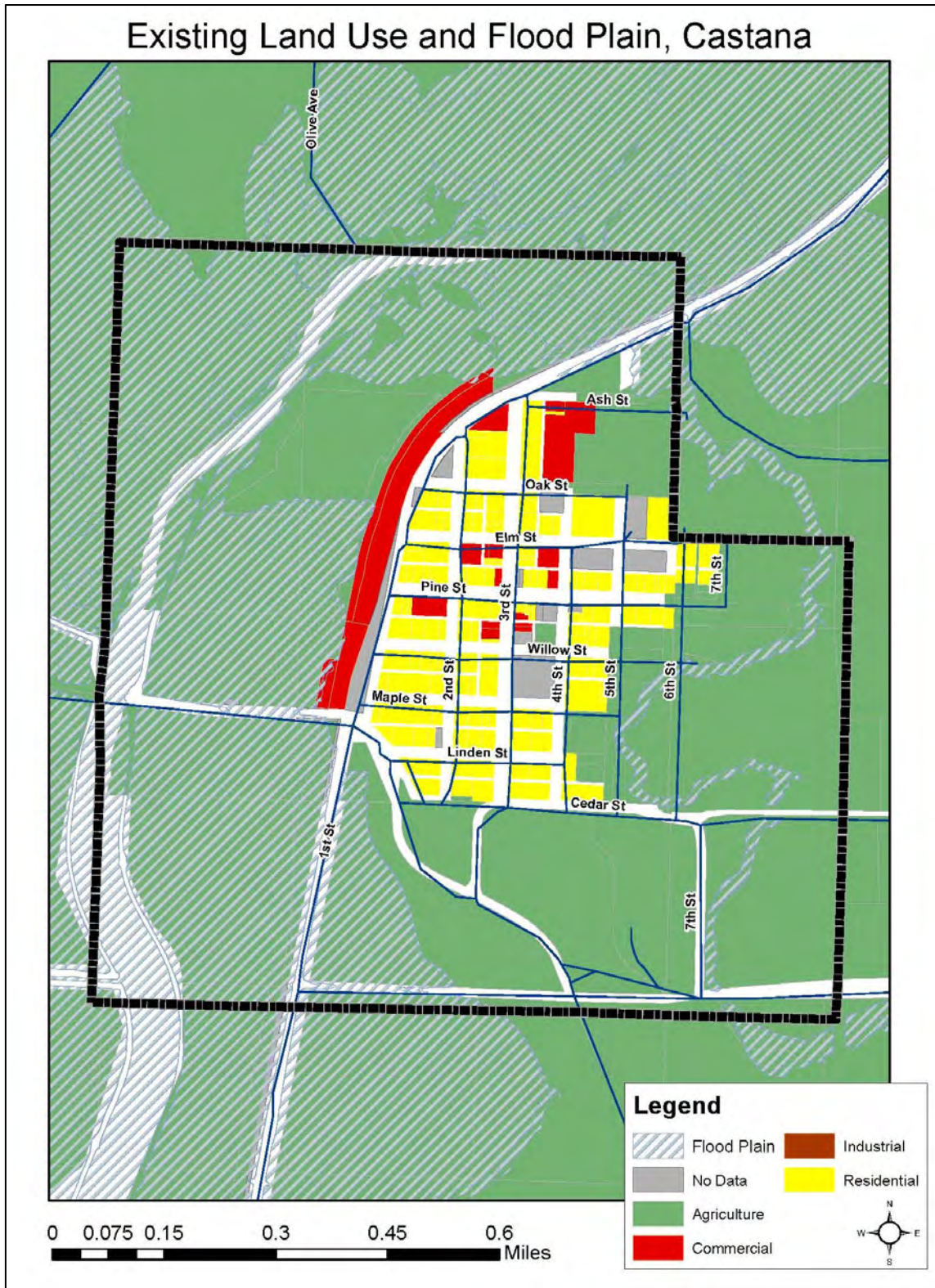




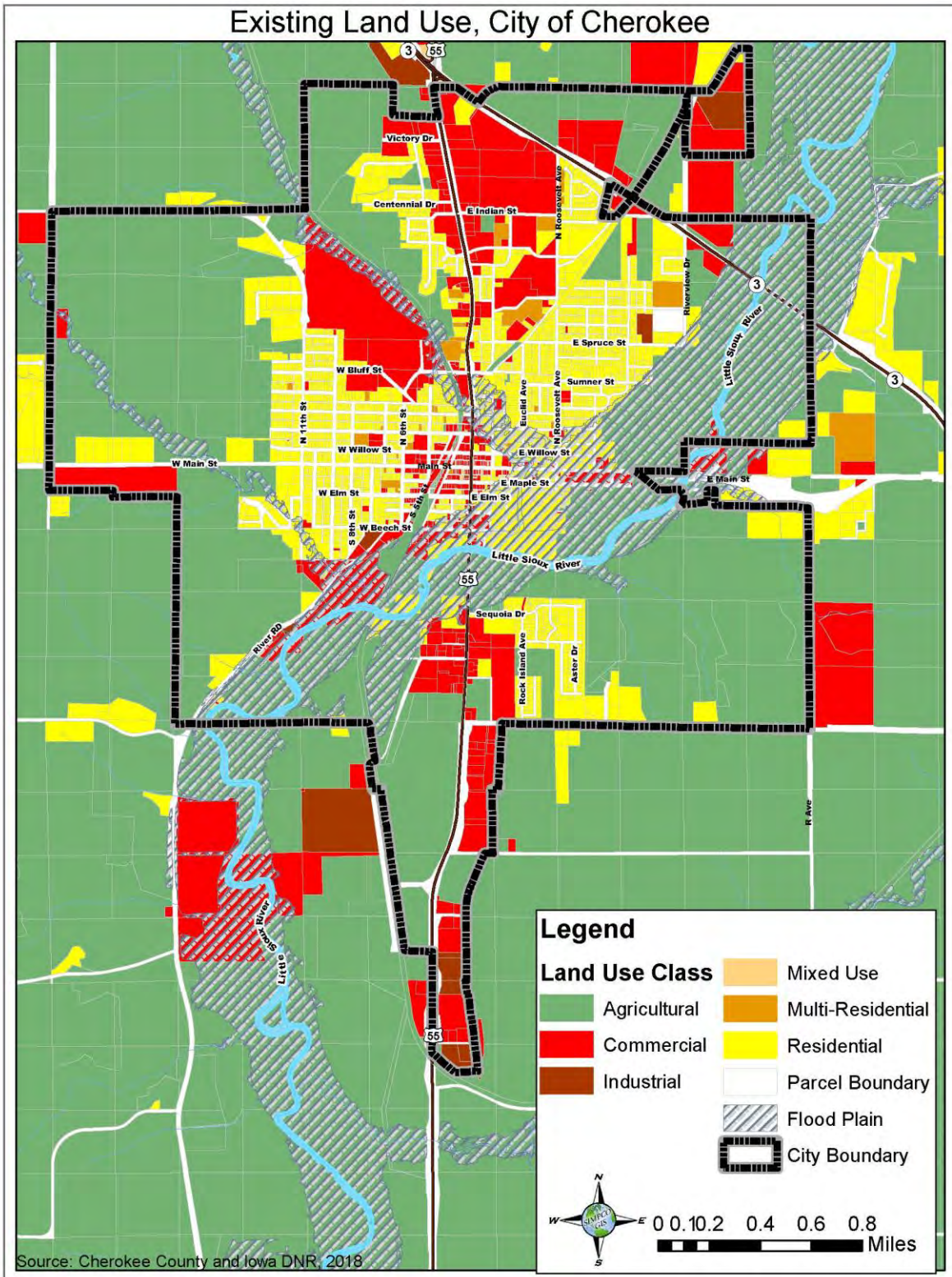


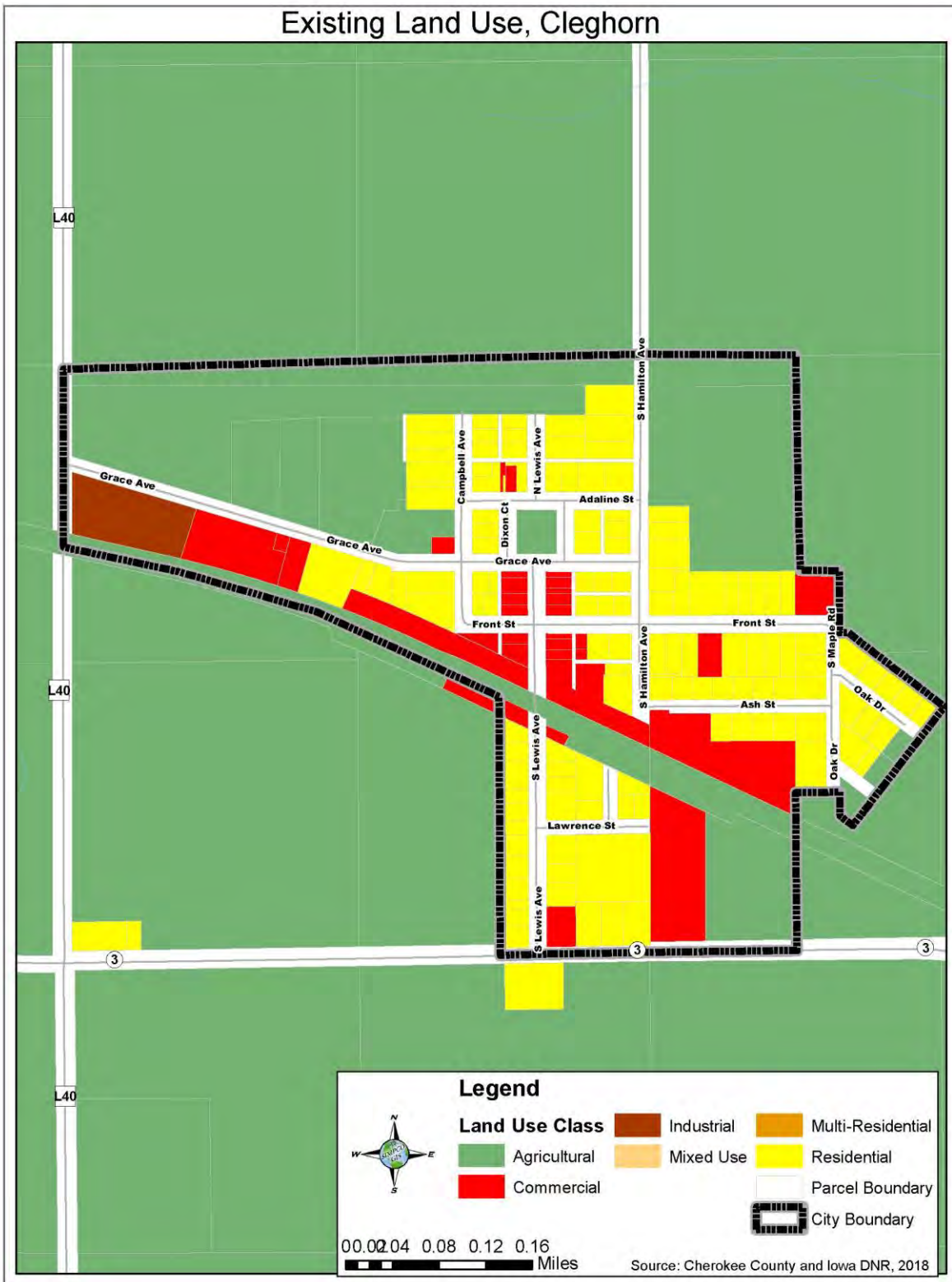




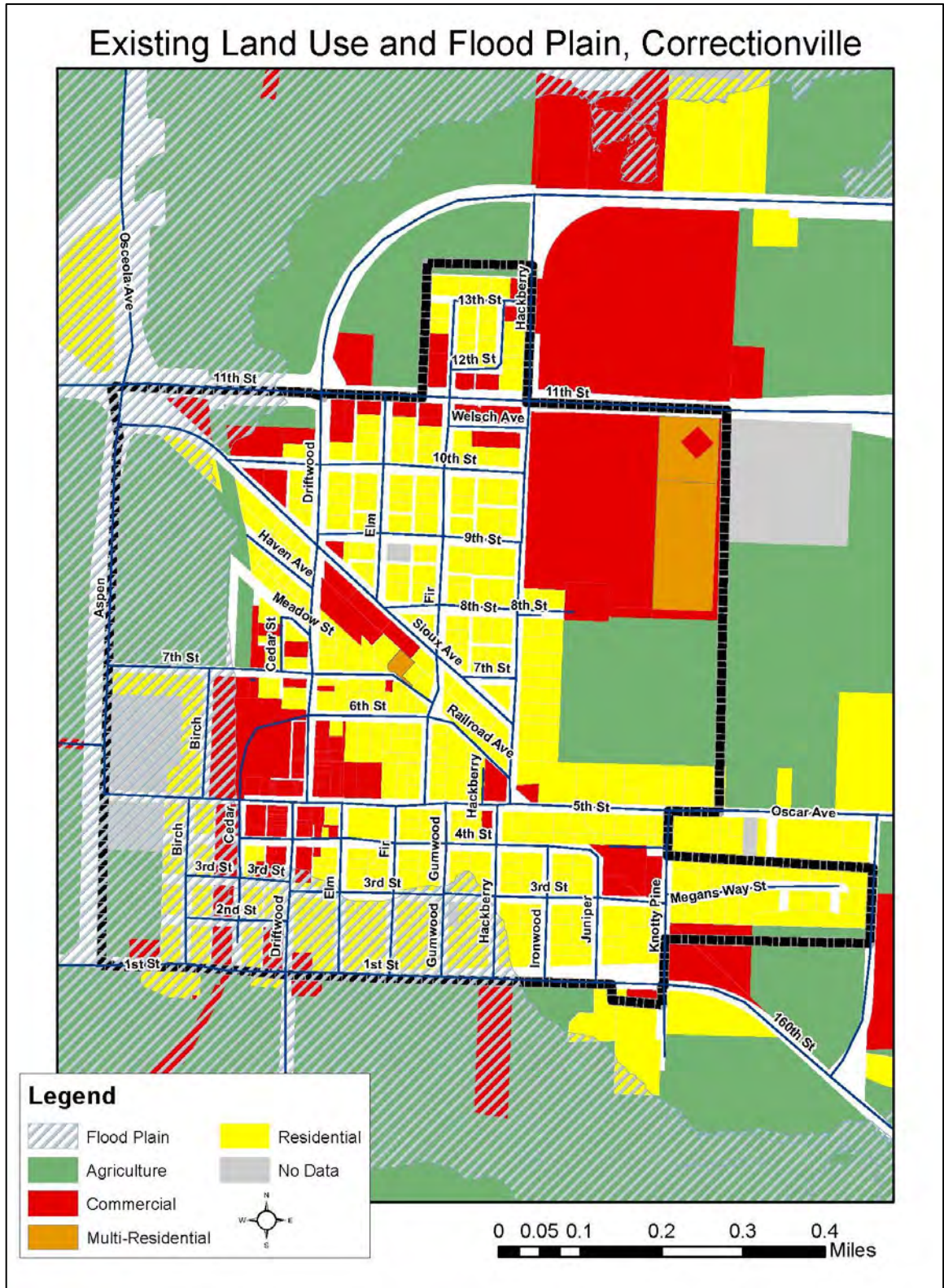








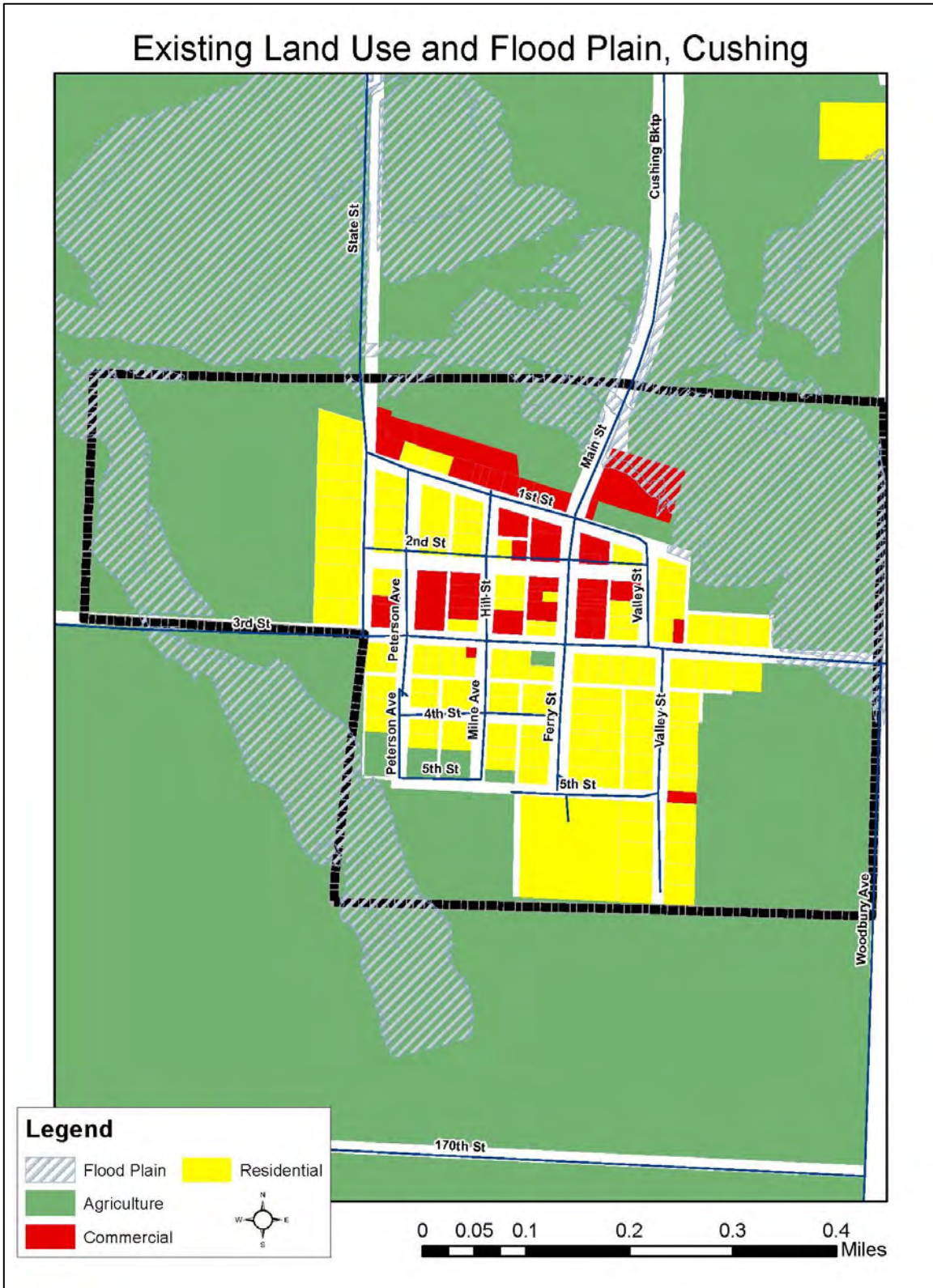




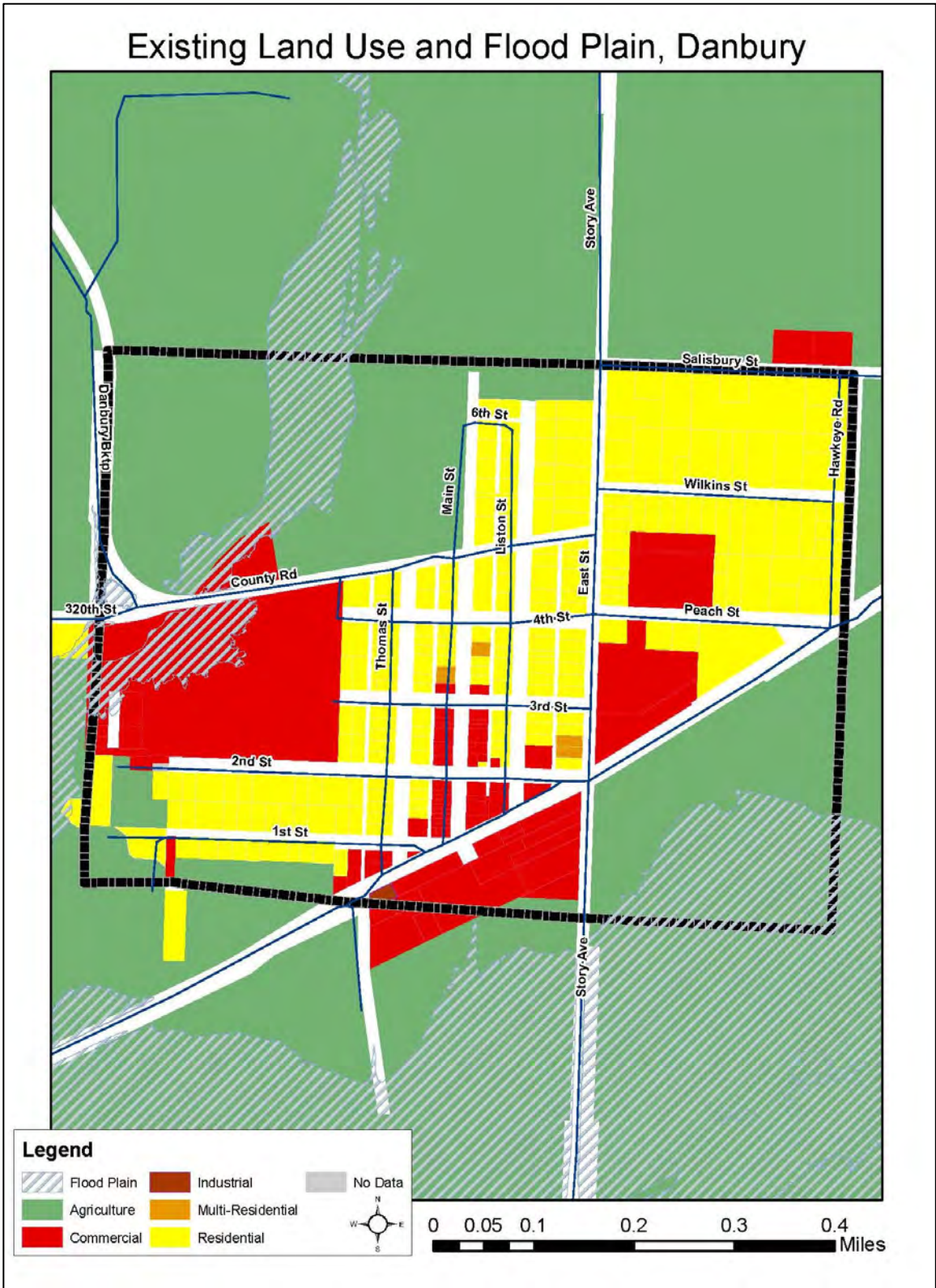




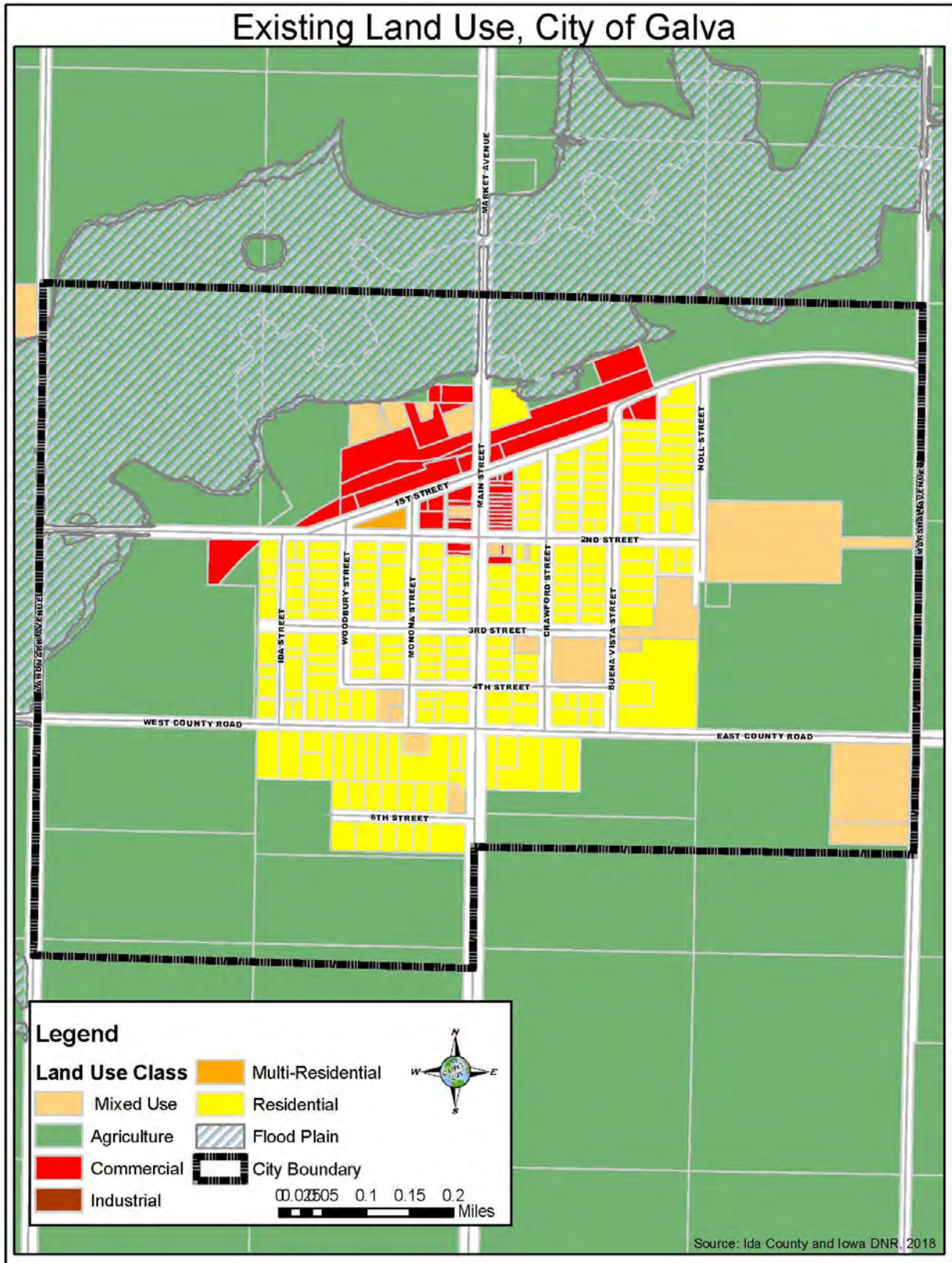
### Existing Land Use and Flood Plain, Cushing



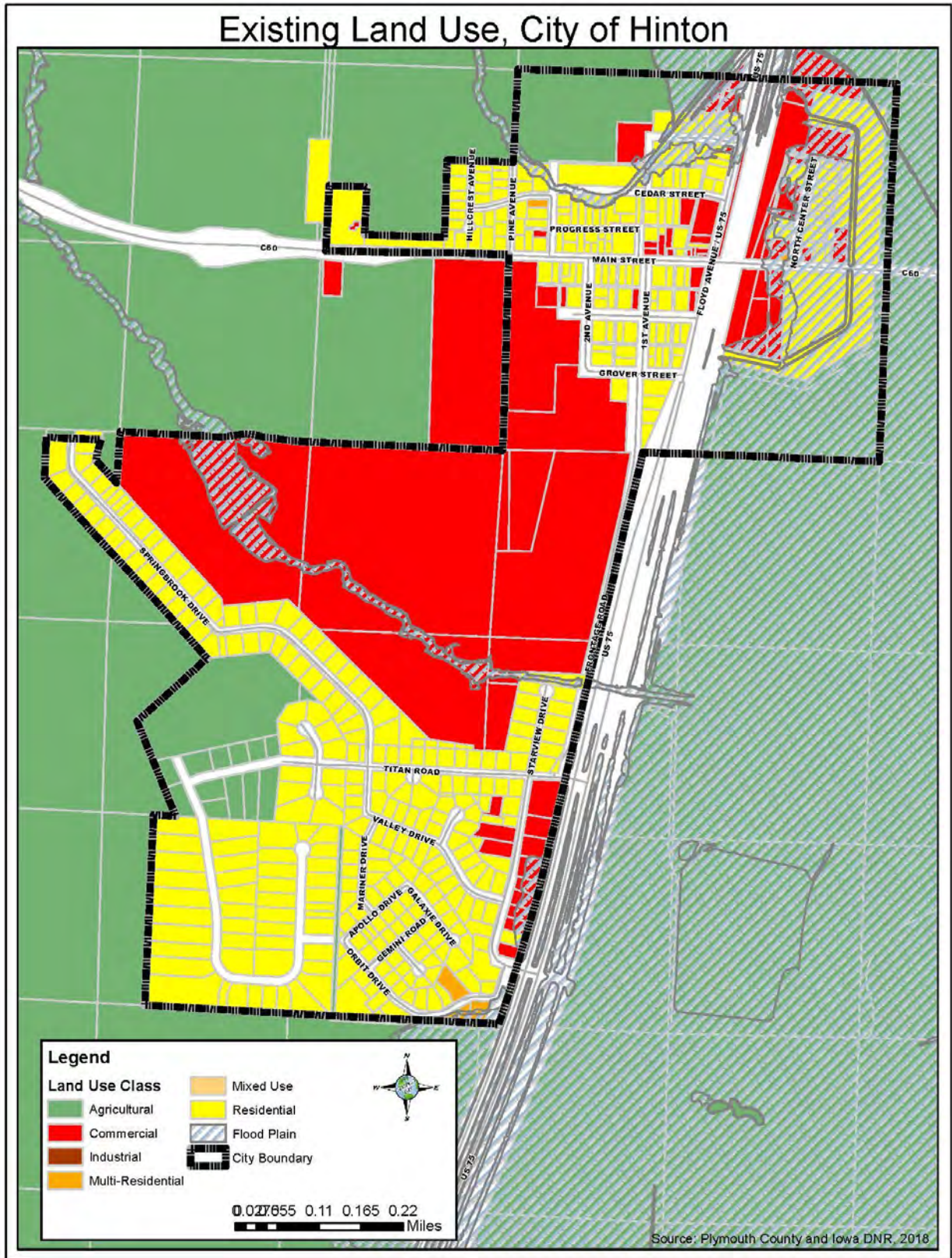
### Existing Land Use and Flood Plain, Danbury



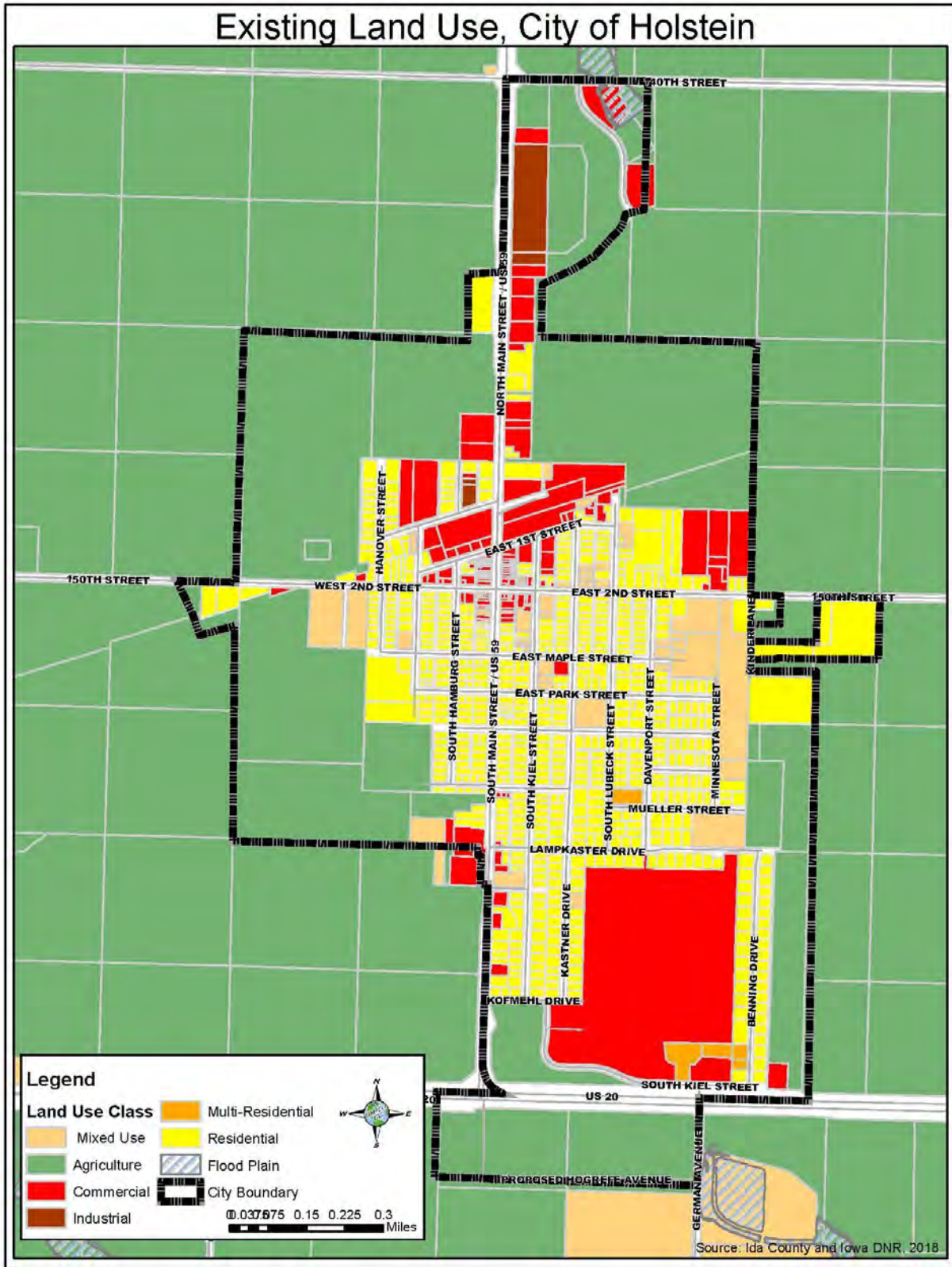




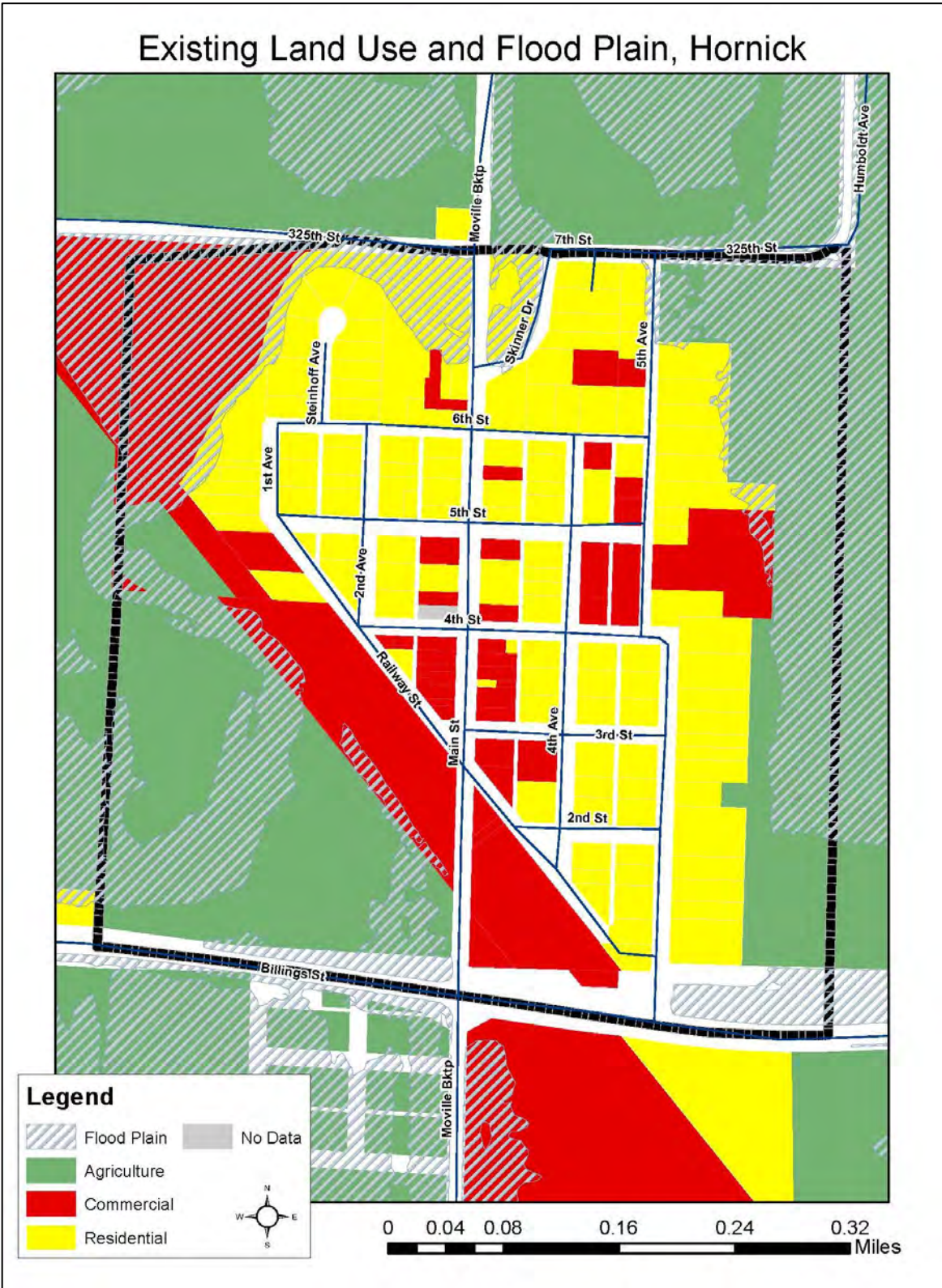




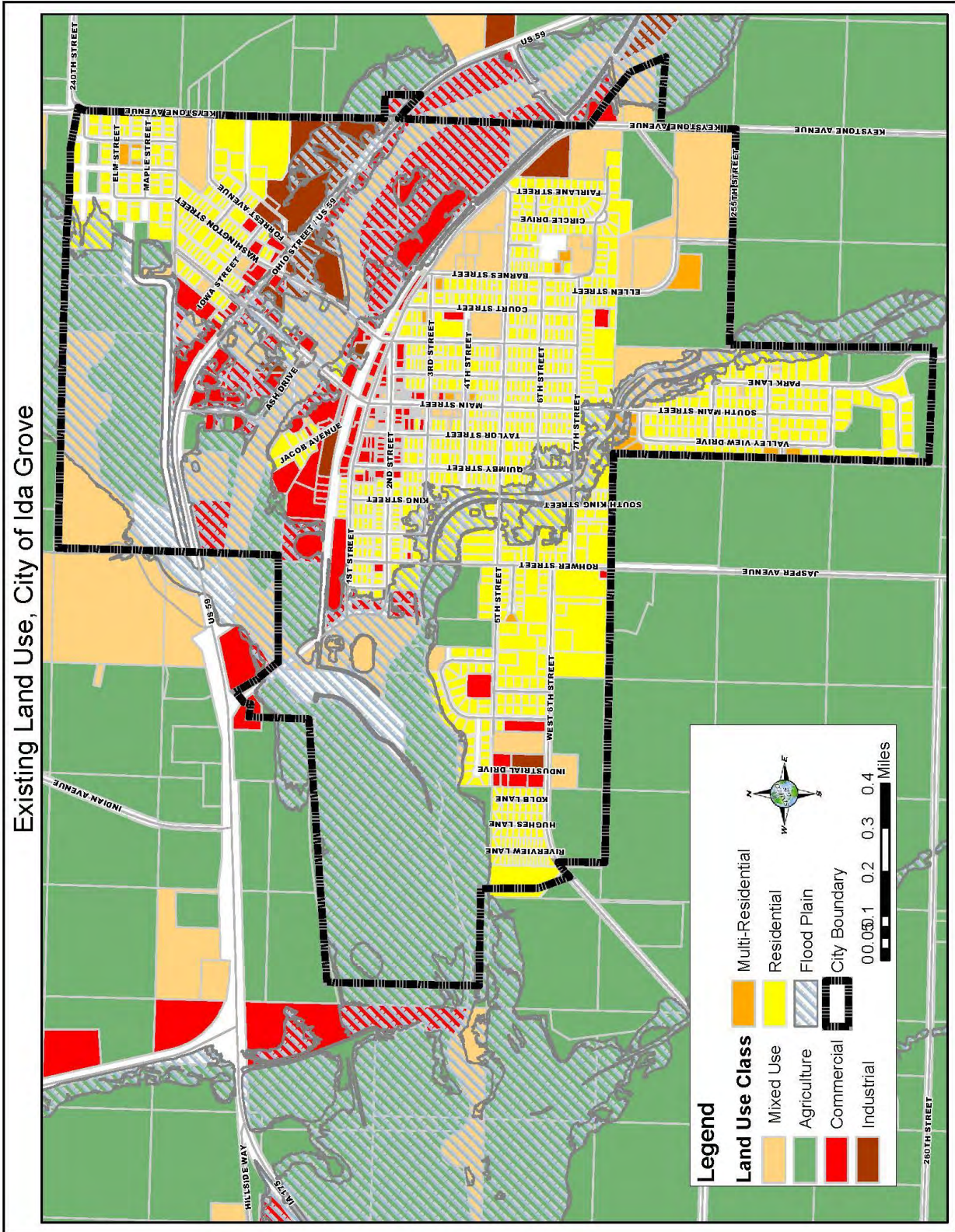




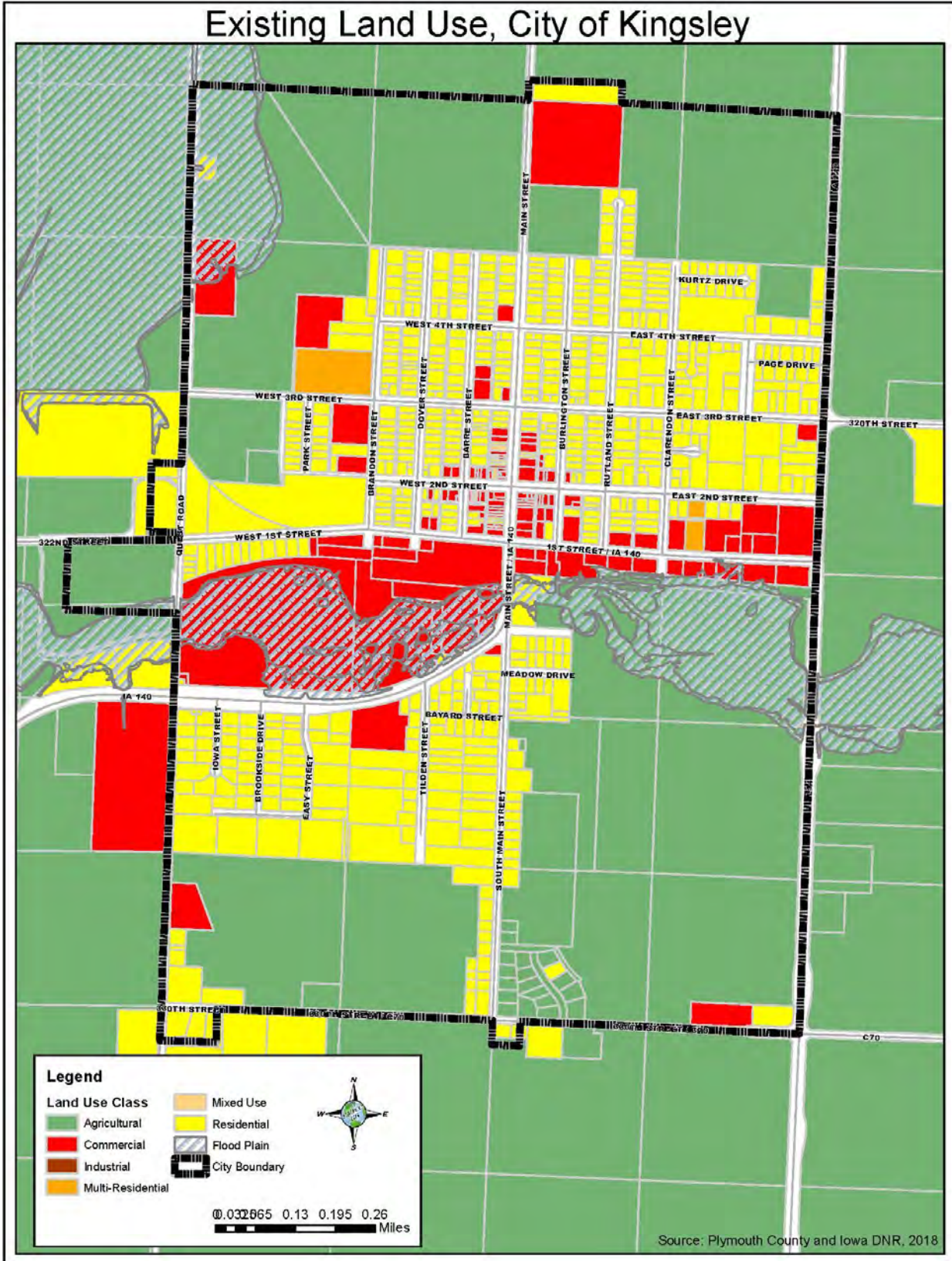
### Existing Land Use and Flood Plain, Hornick

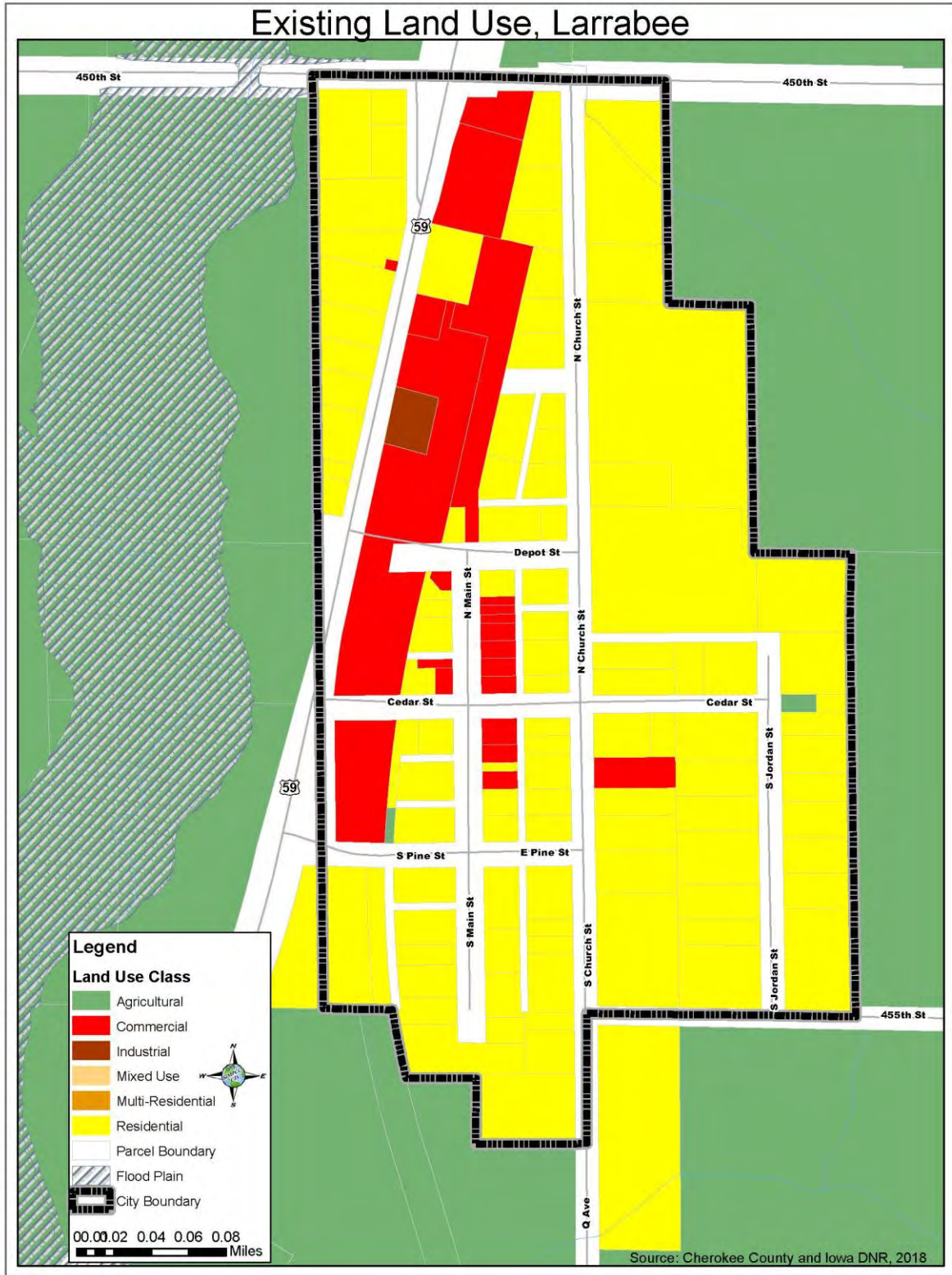






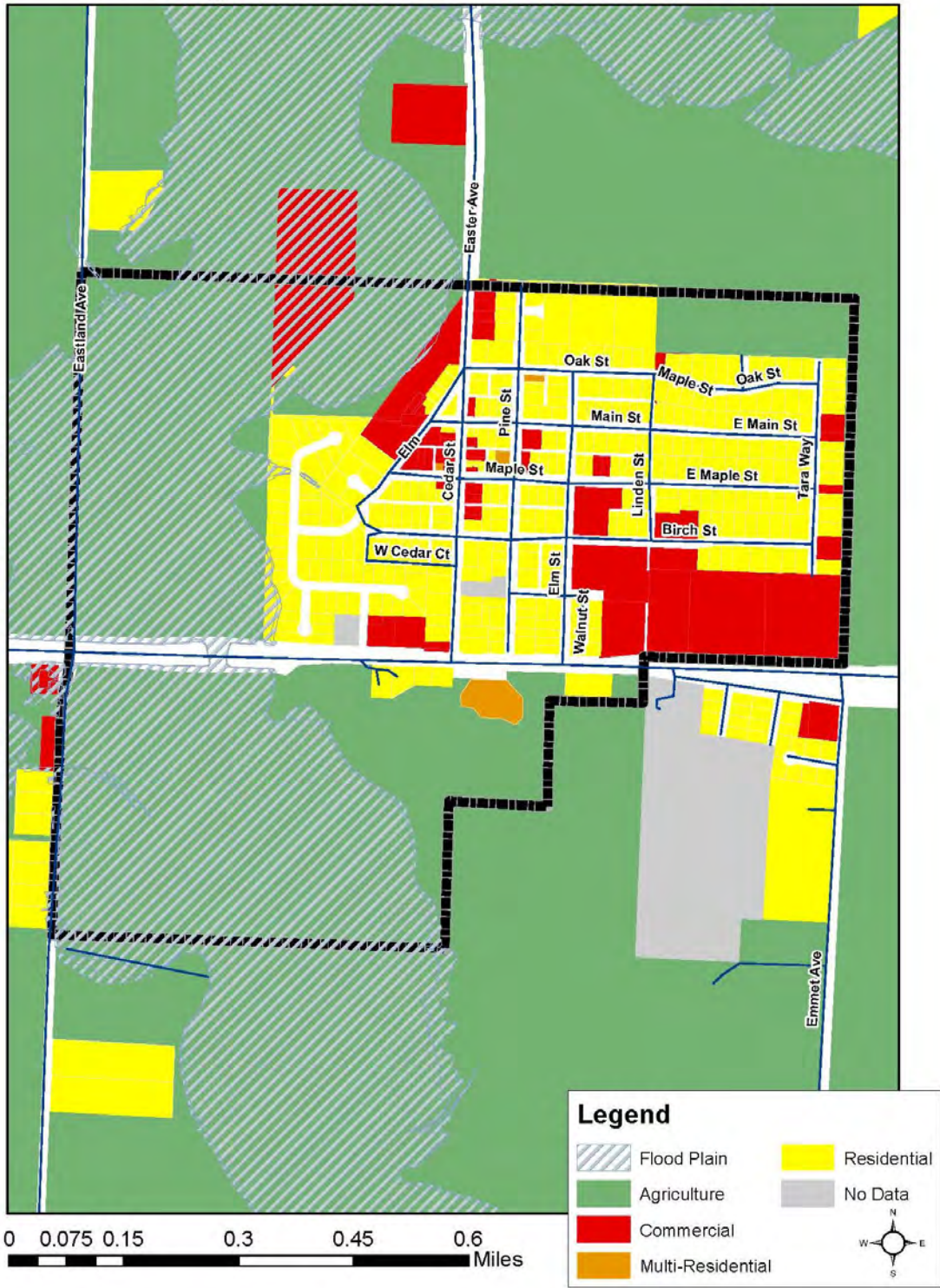






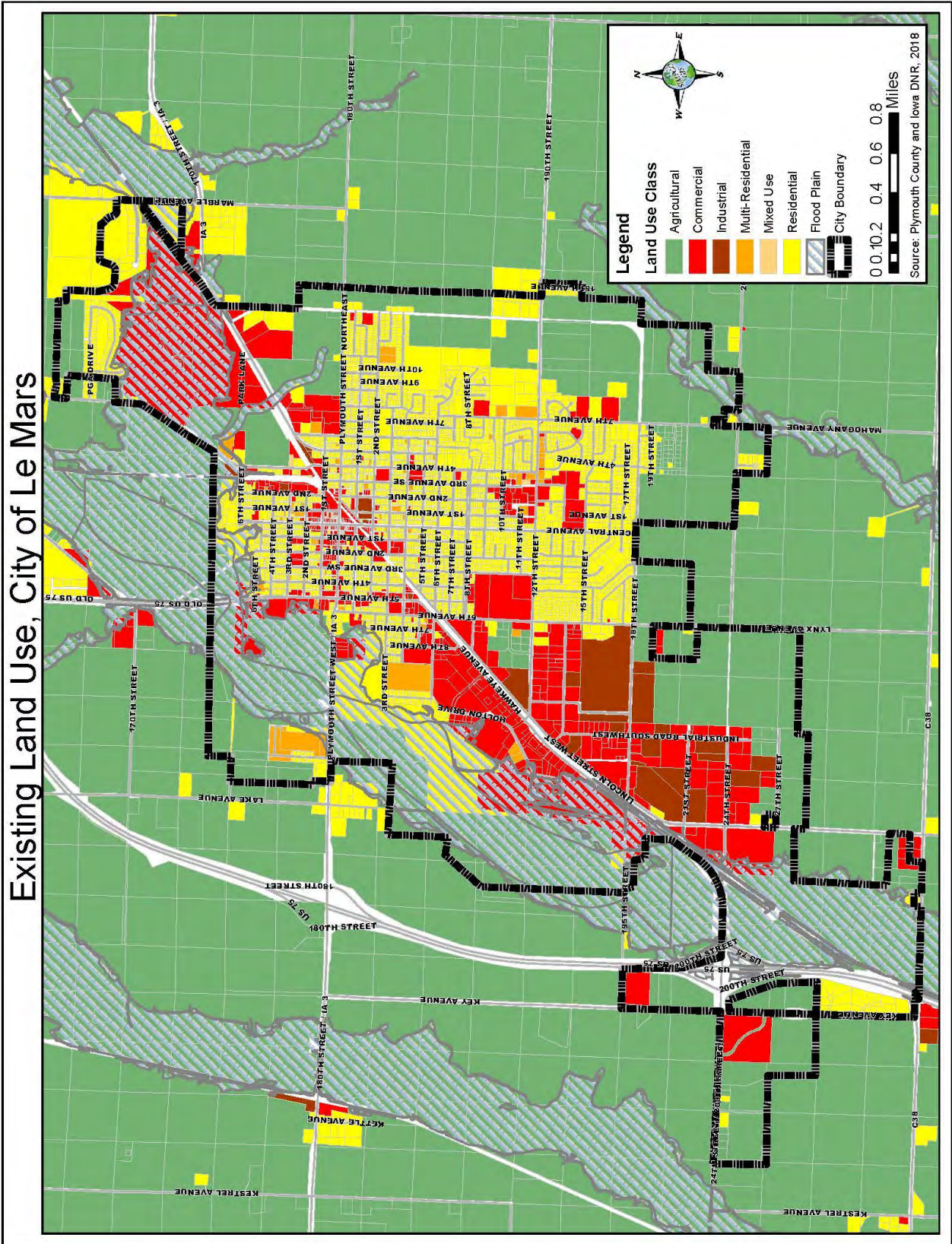


### Existing Land Use and Flood Plain, Lawton



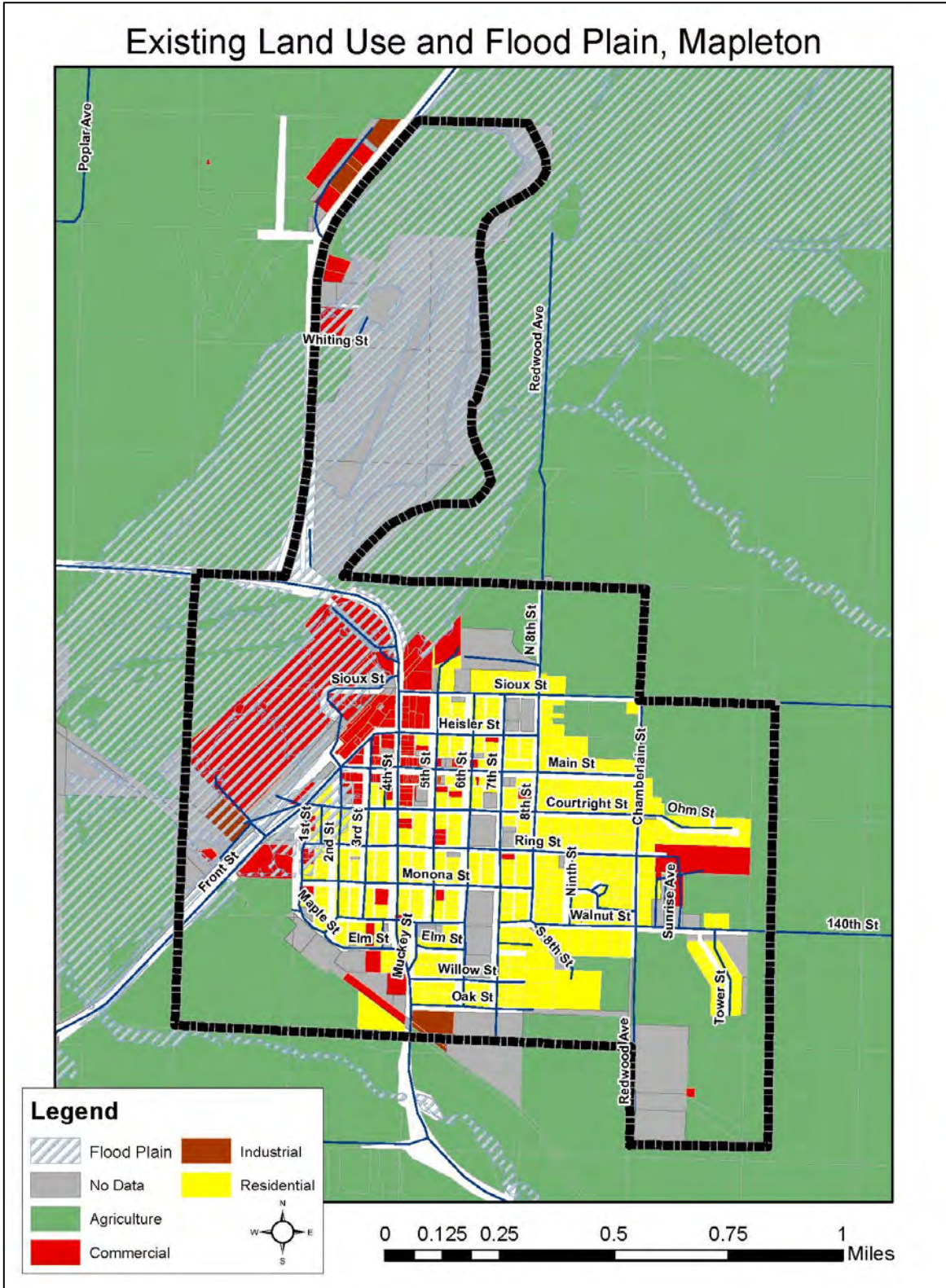


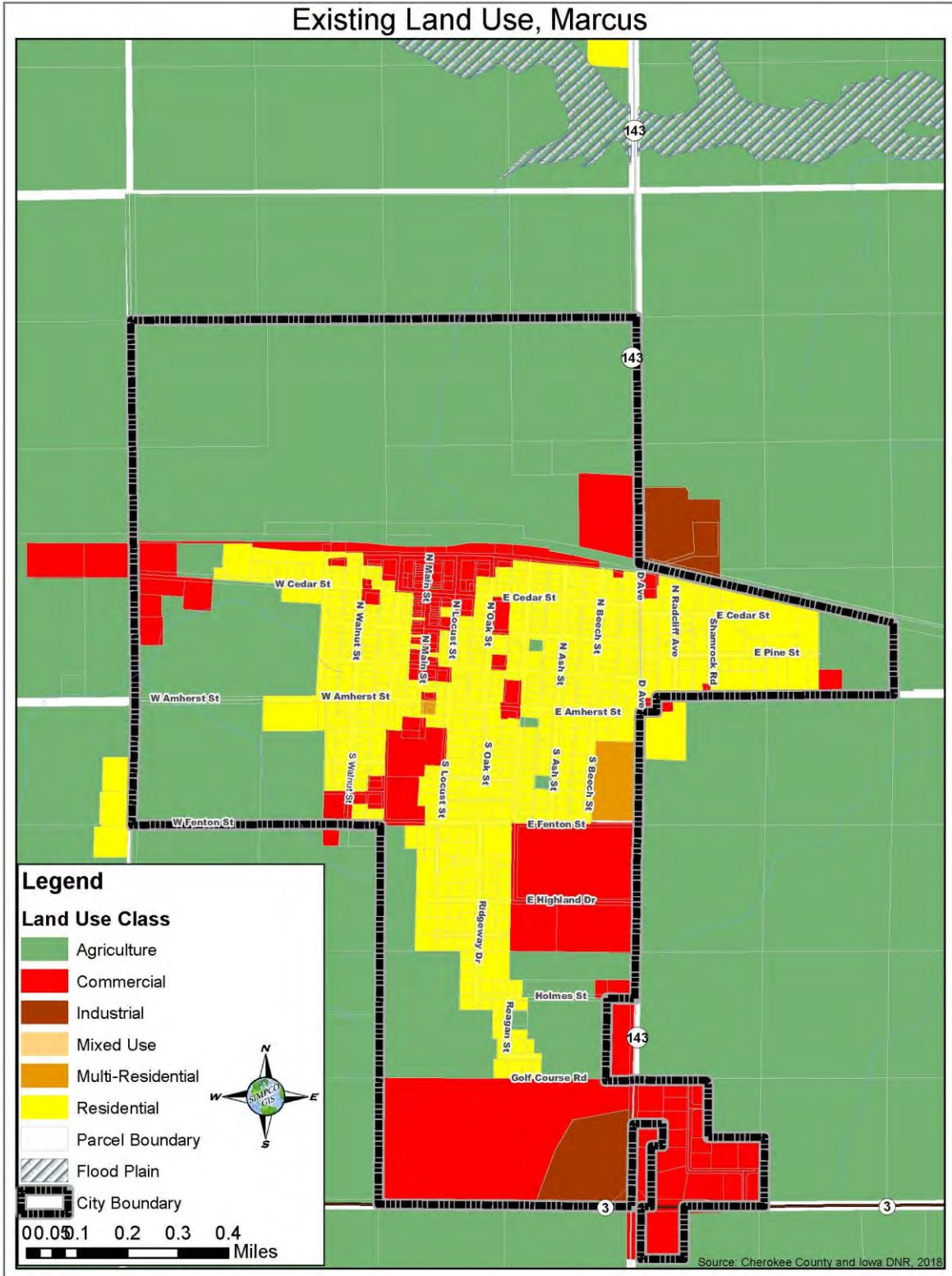
Existing Land Use, City of Le Mars





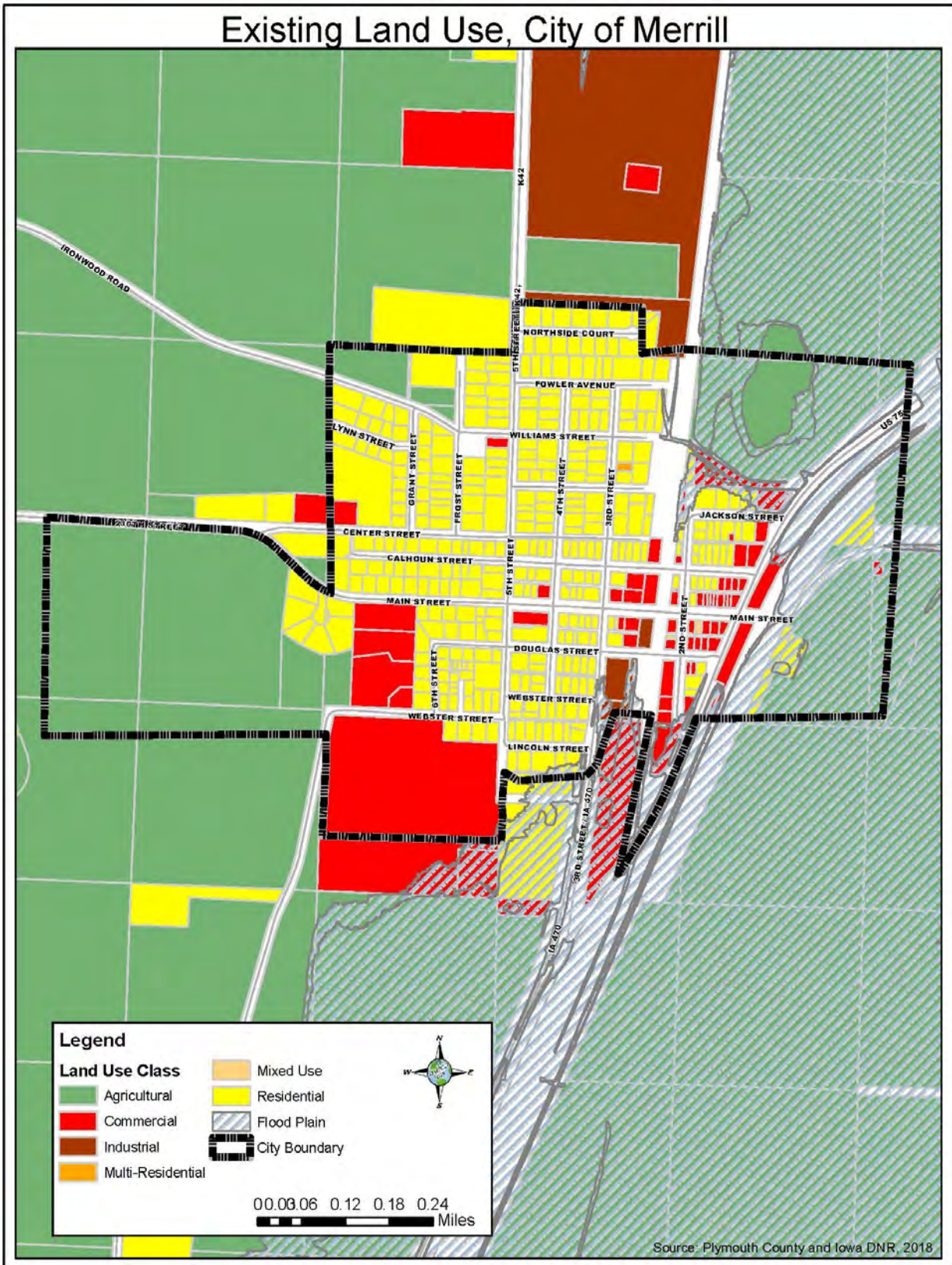
### Existing Land Use and Flood Plain, Mapleton







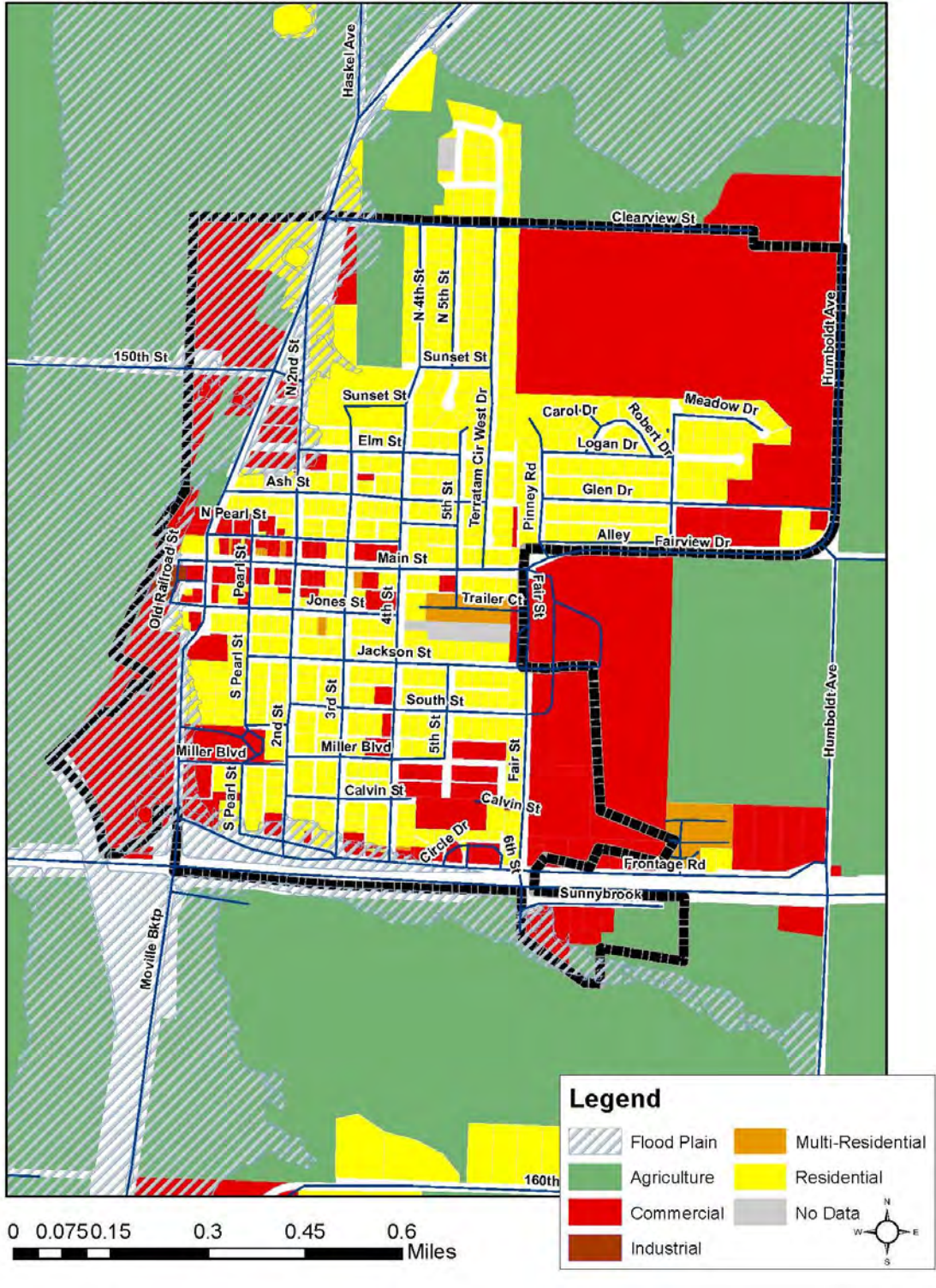






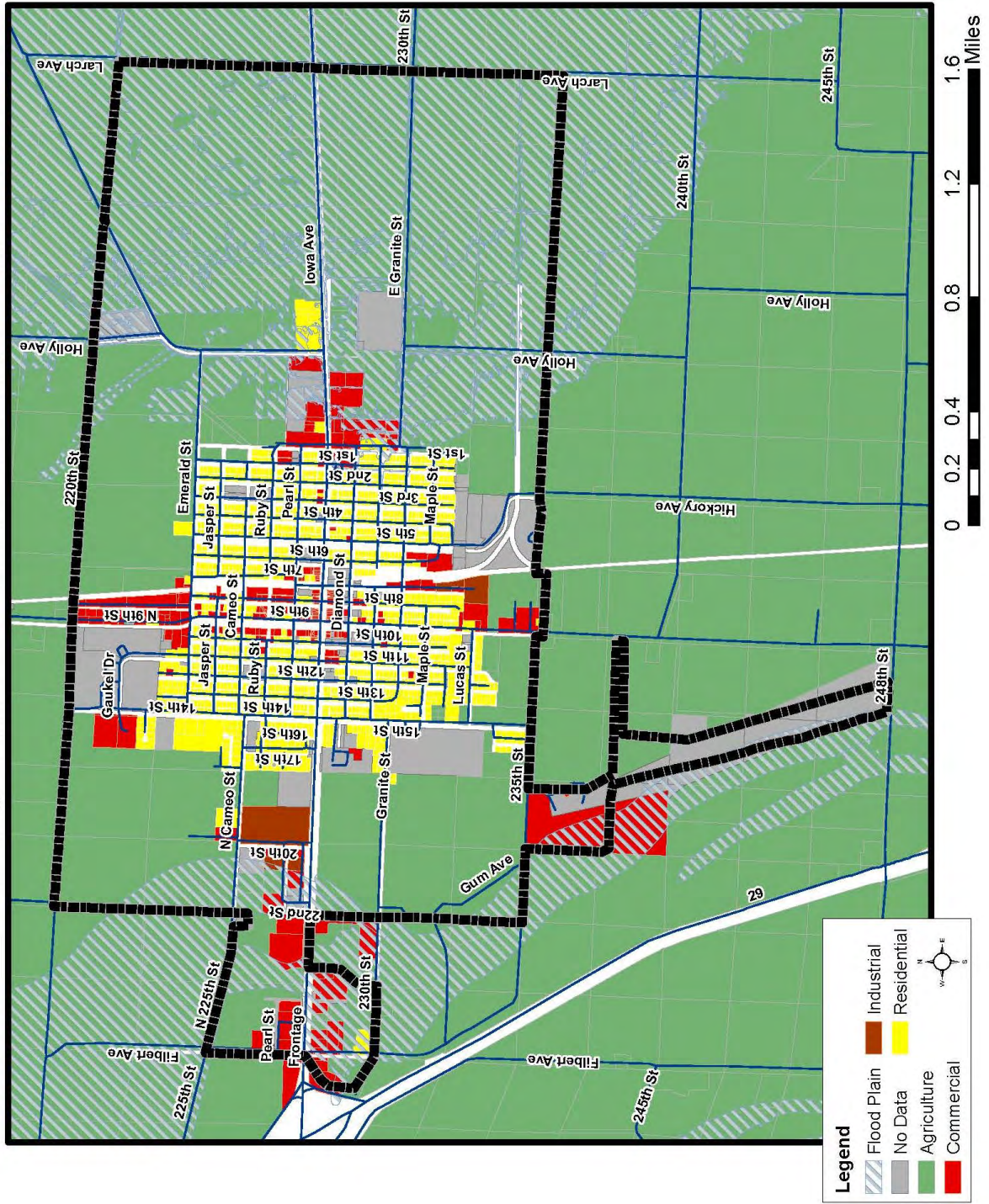


### Existing Land Use and Flood Plain, Moville



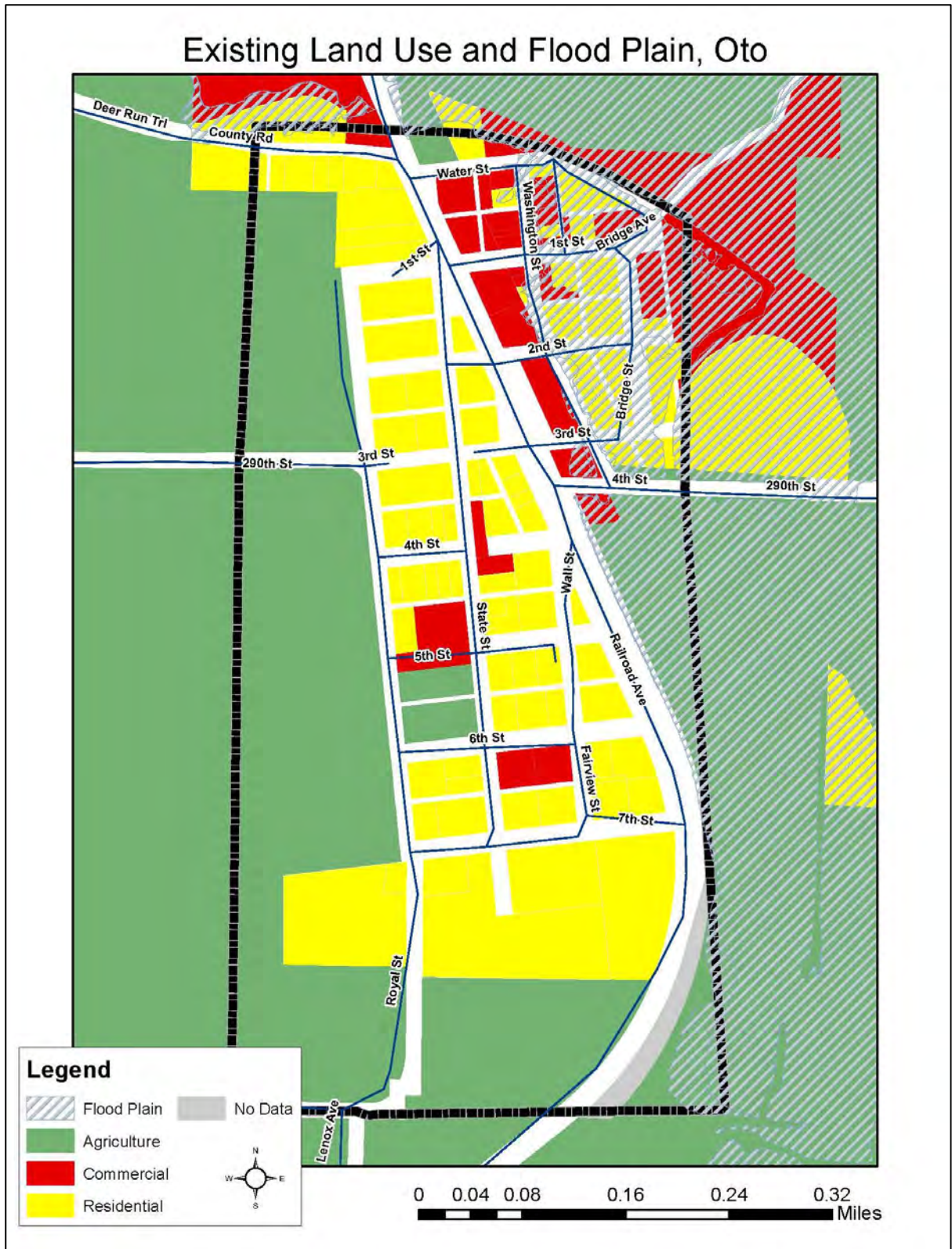


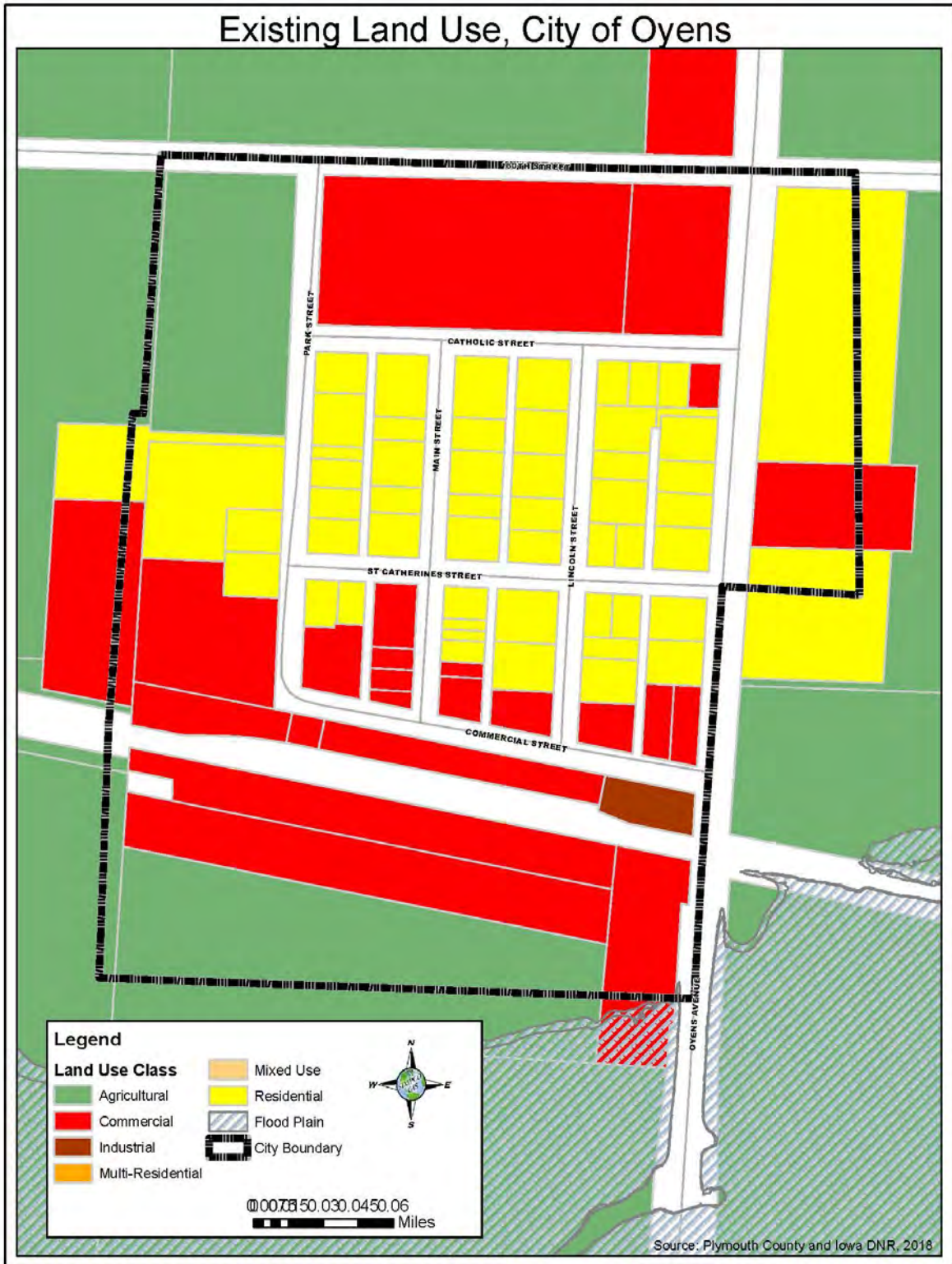
# Existing Land Use and Flood Plain, Onawa





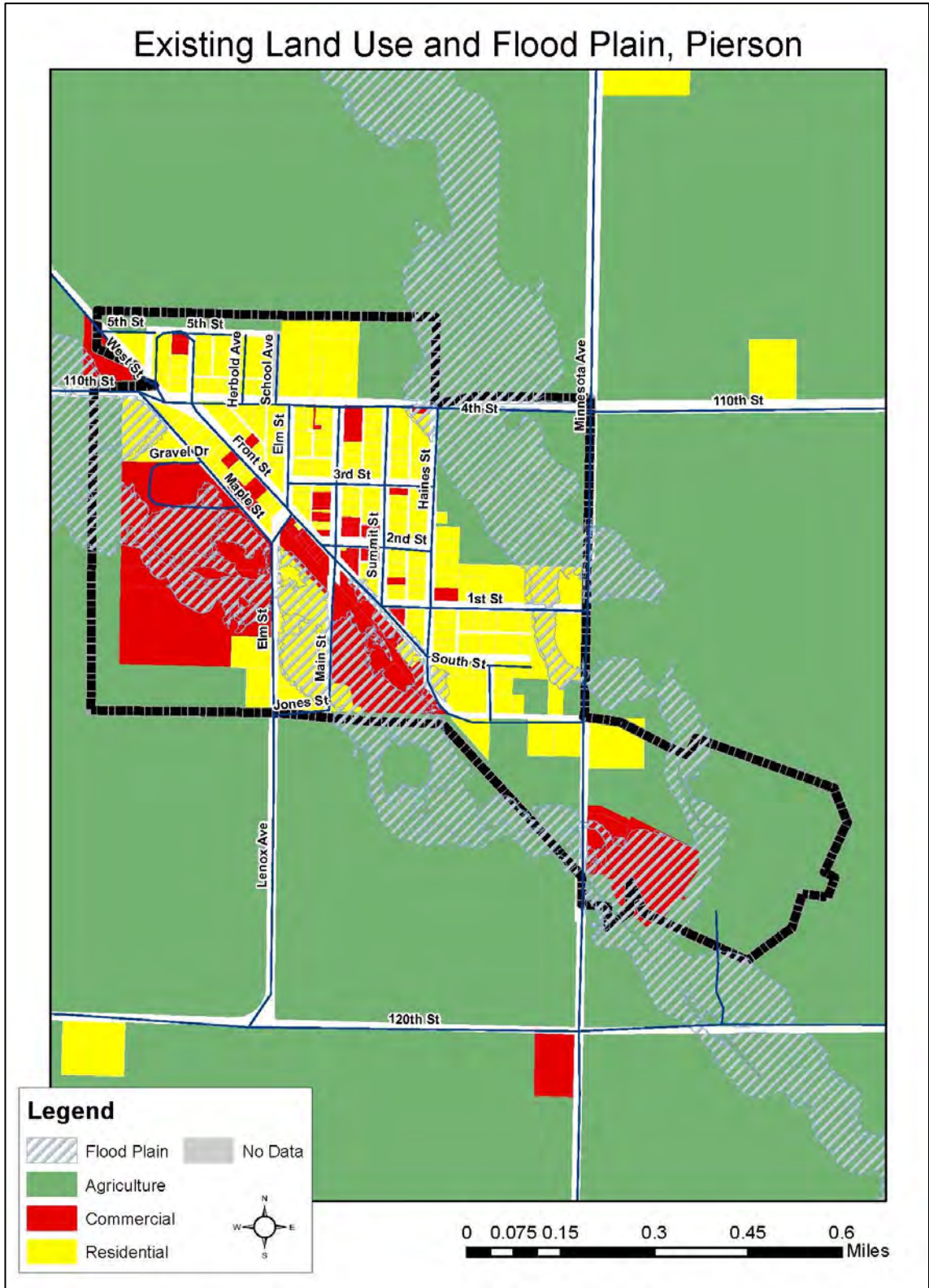
### Existing Land Use and Flood Plain, Oto

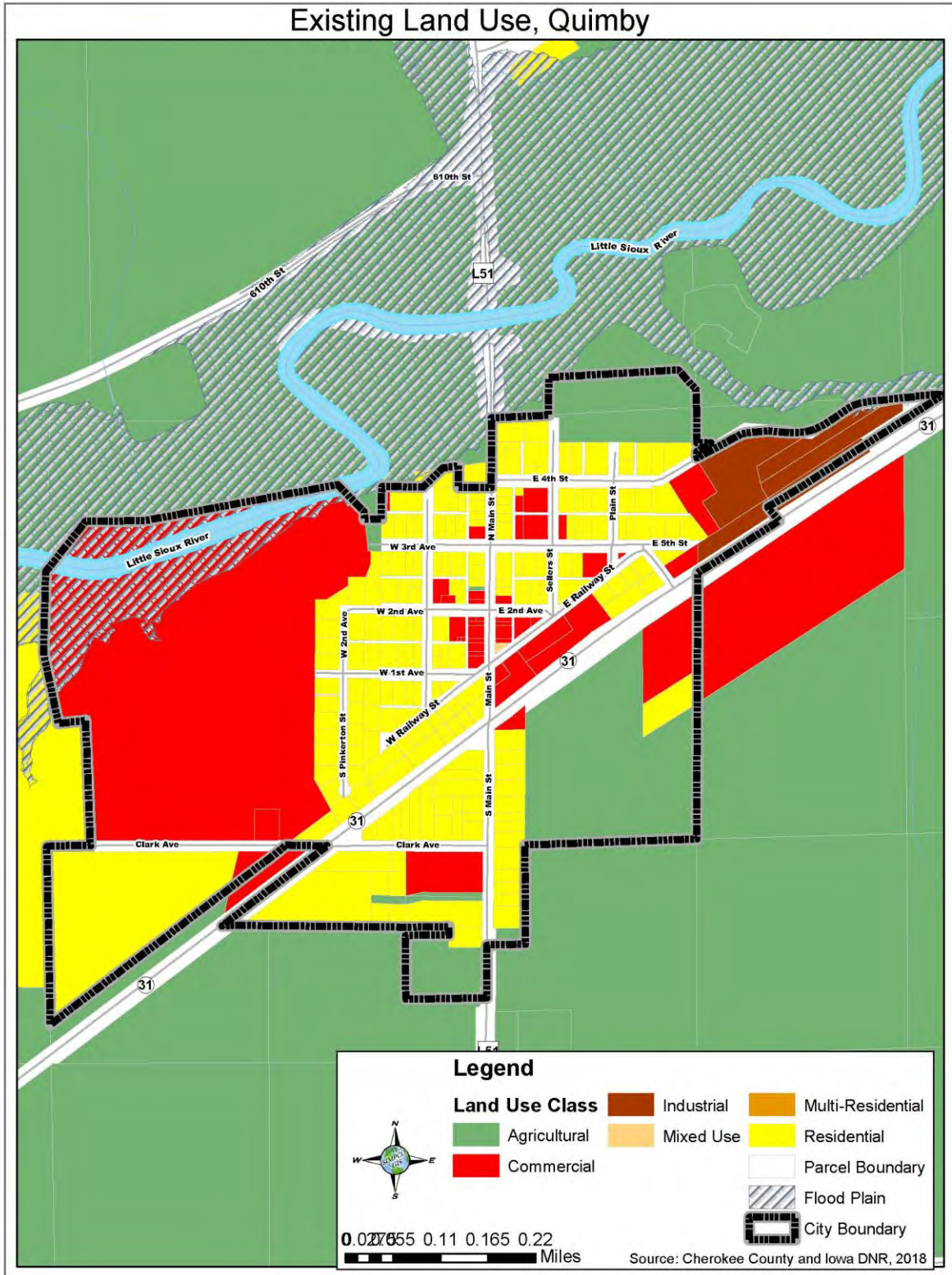






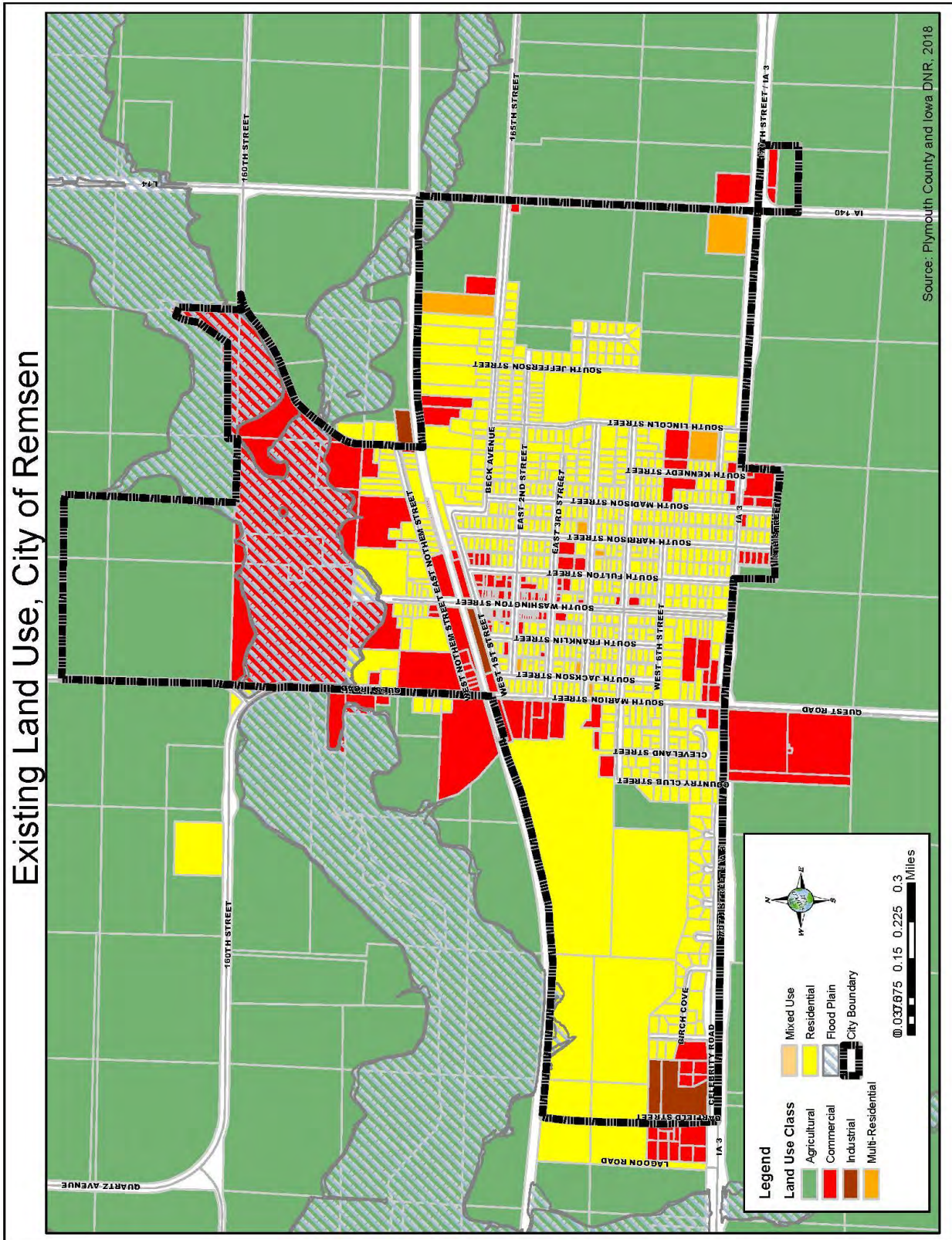
### Existing Land Use and Flood Plain, Pierson



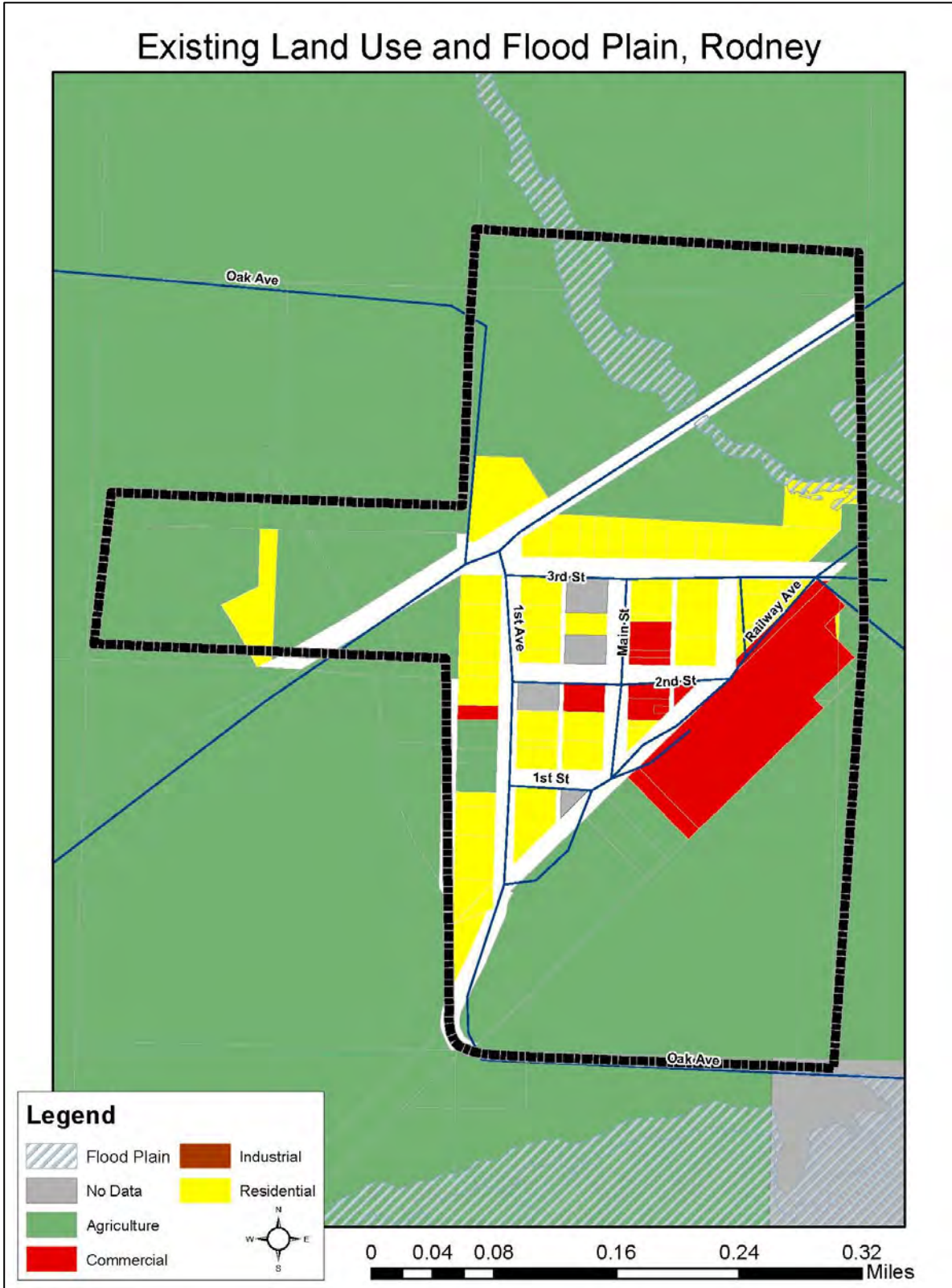




Existing Land Use, City of Remsen

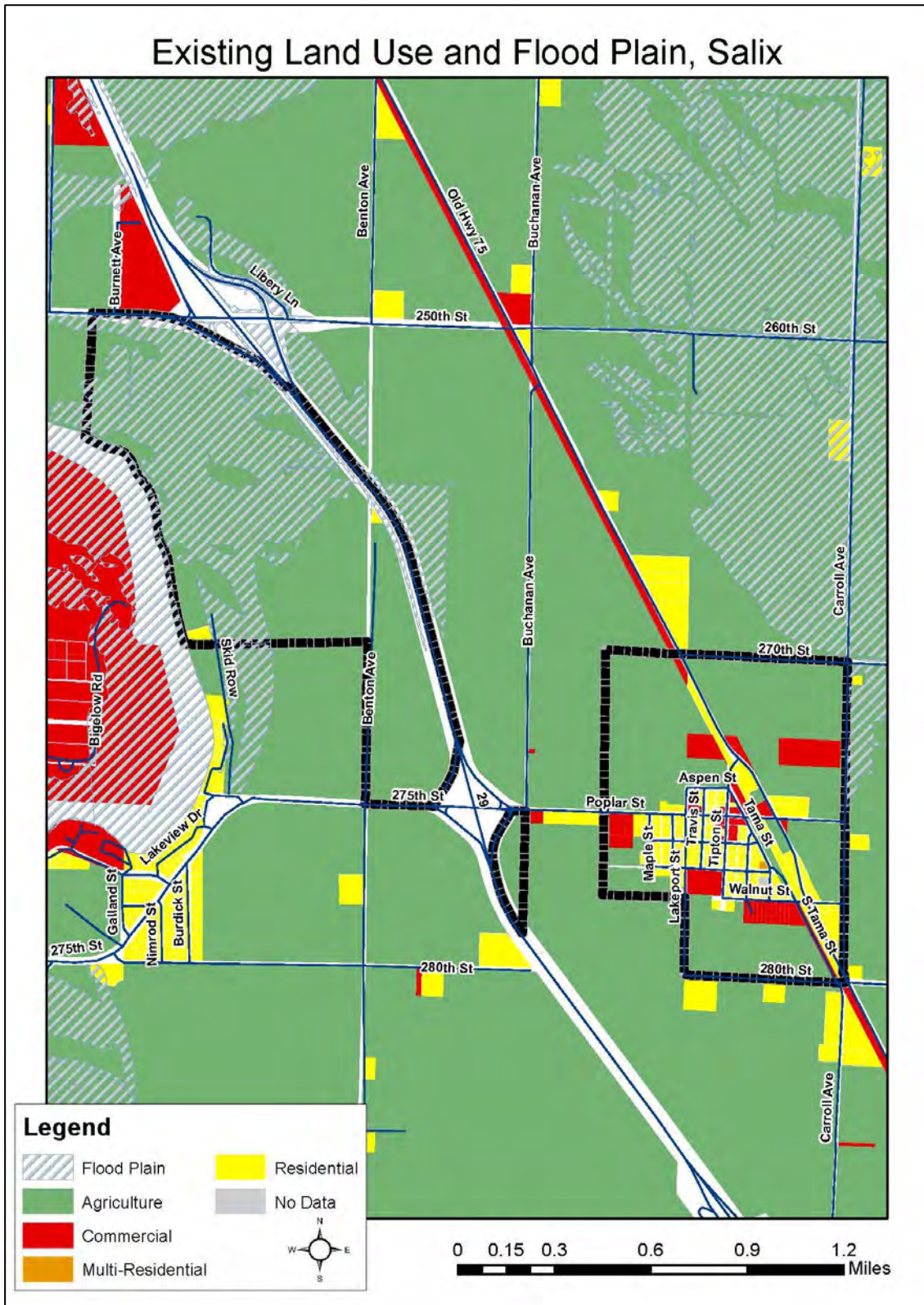


### Existing Land Use and Flood Plain, Rodney



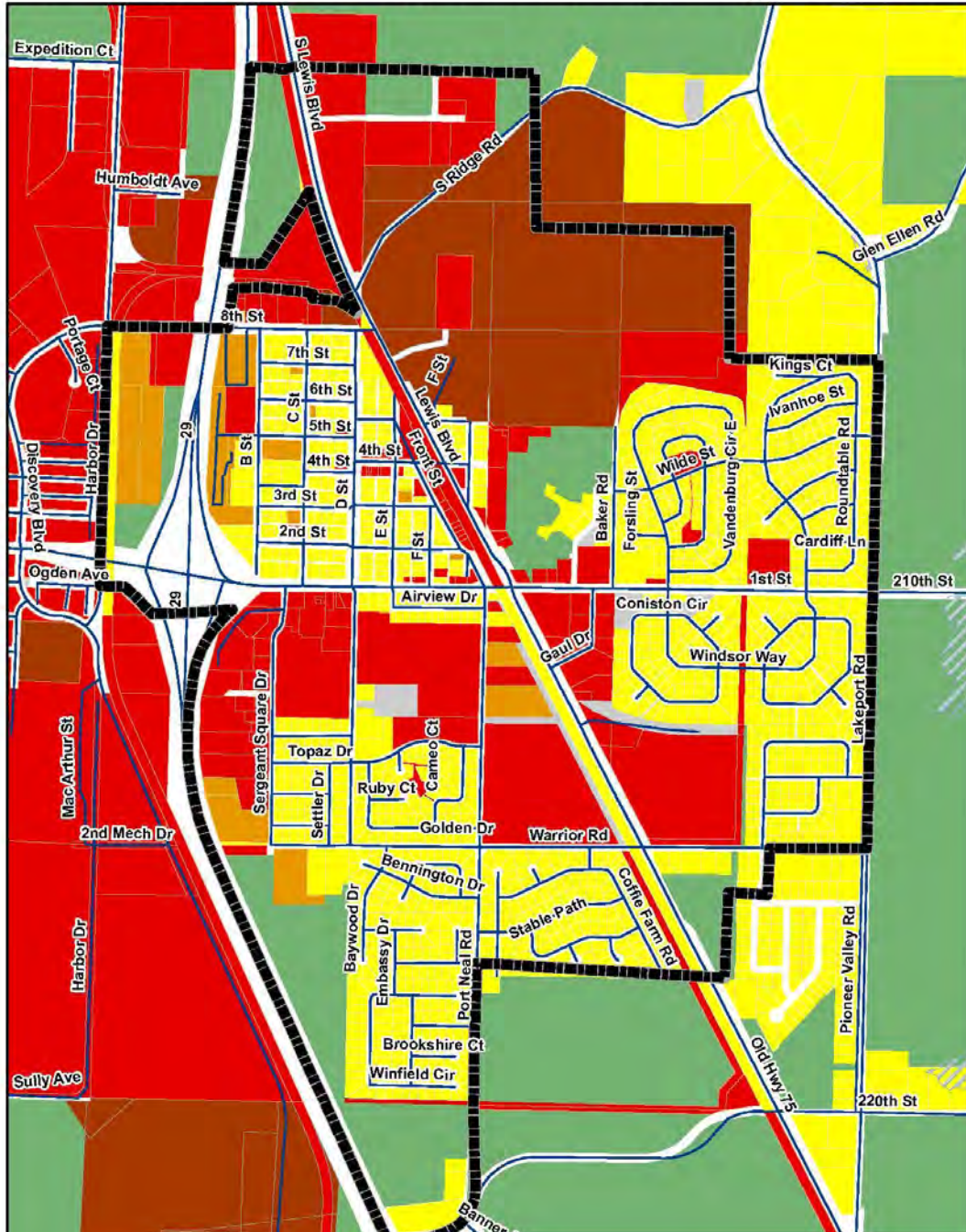


### Existing Land Use and Flood Plain, Salix





## Existing Land Use and Flood Plain, Sergeant Bluff

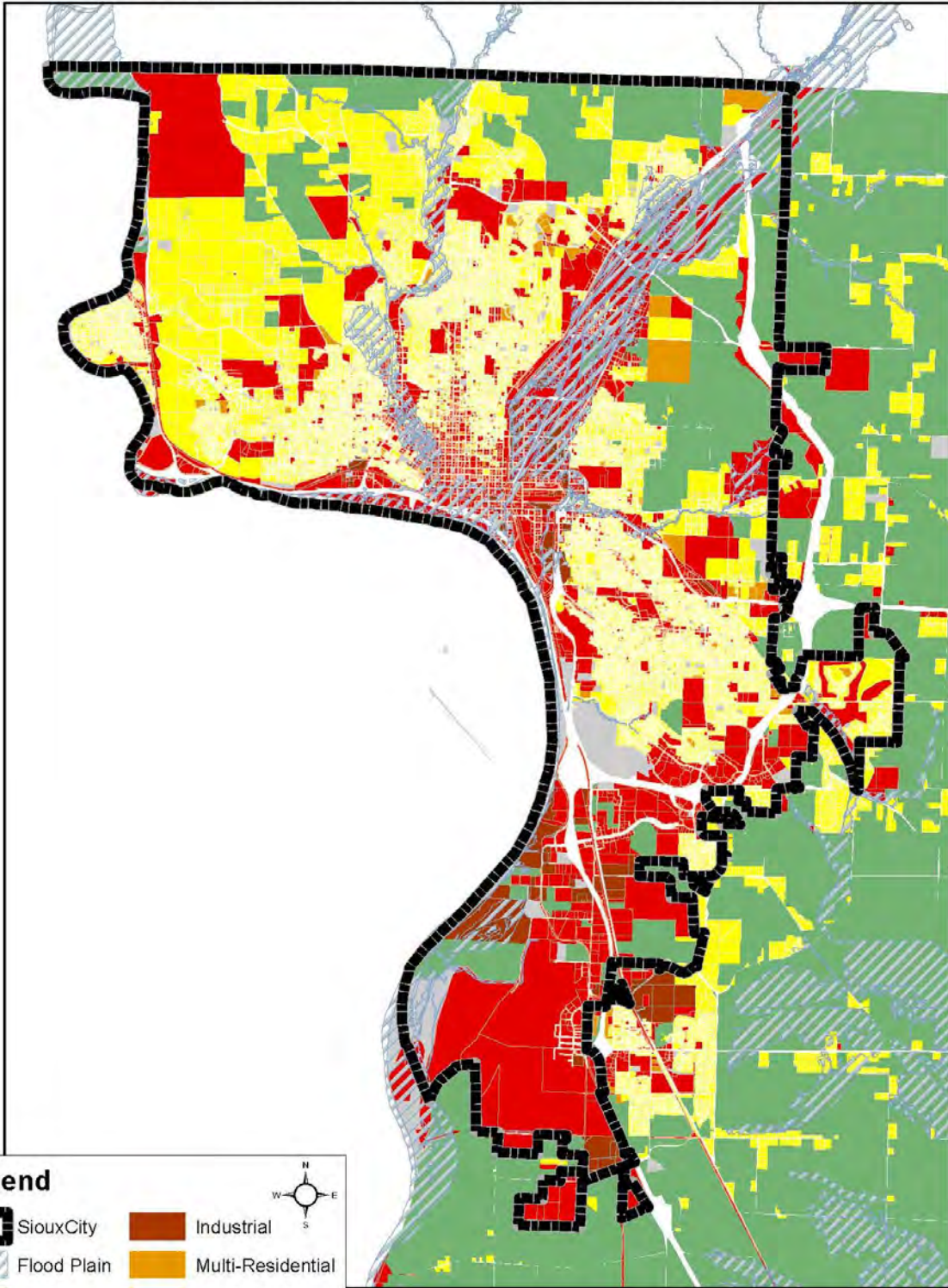


**Legend**

wdrby_cities selection	Commercial	Residential
Flood Plain	Industrial	No Data
Agriculture	Multi-Residential	



### Existing Land Use and Flood Plain, Sioux City



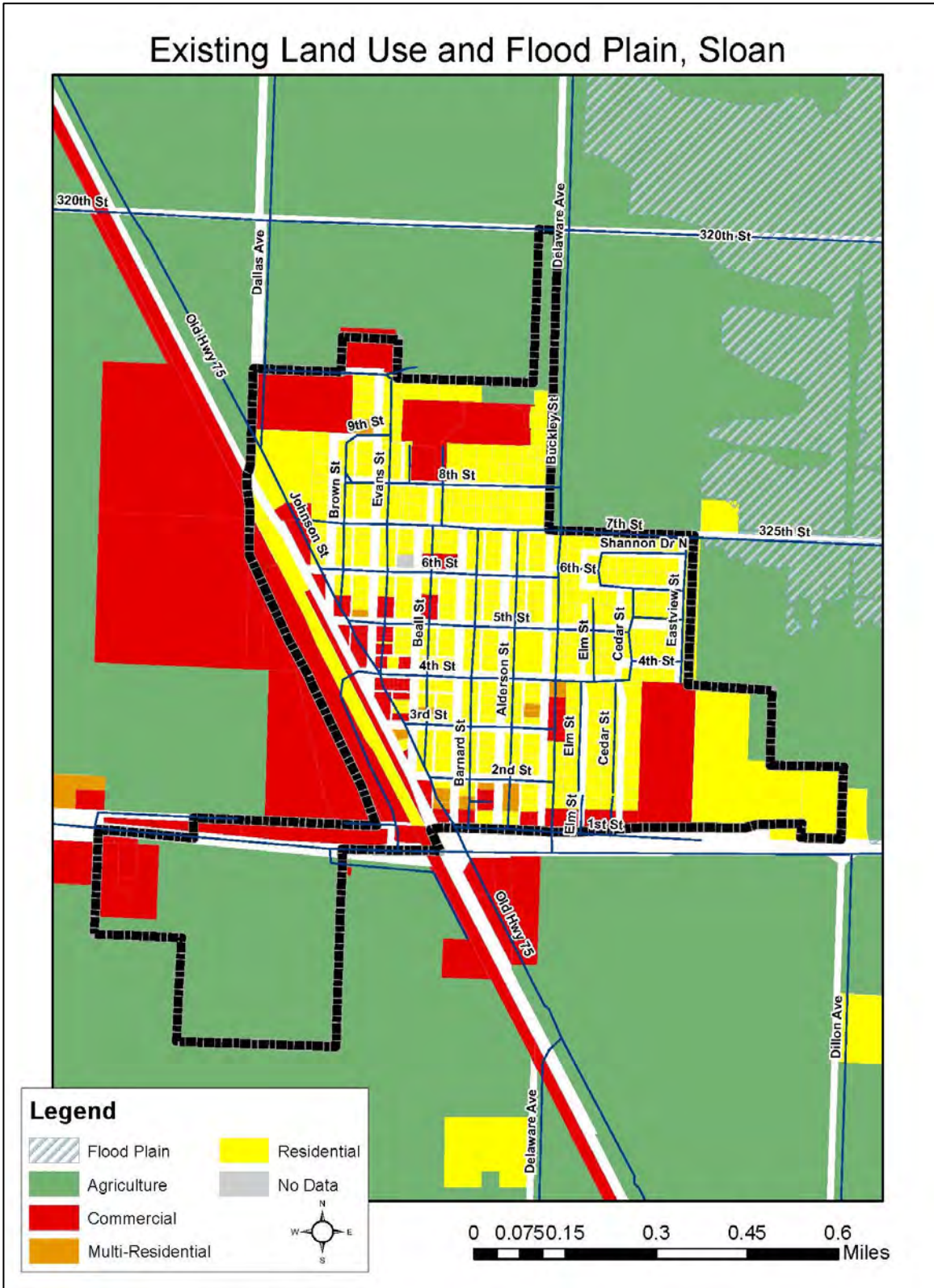
**Legend**

- Sioux City
- Flood Plain
- Agriculture
- Commercial
- Industrial
- Multi-Residential
- Residential
- No Data



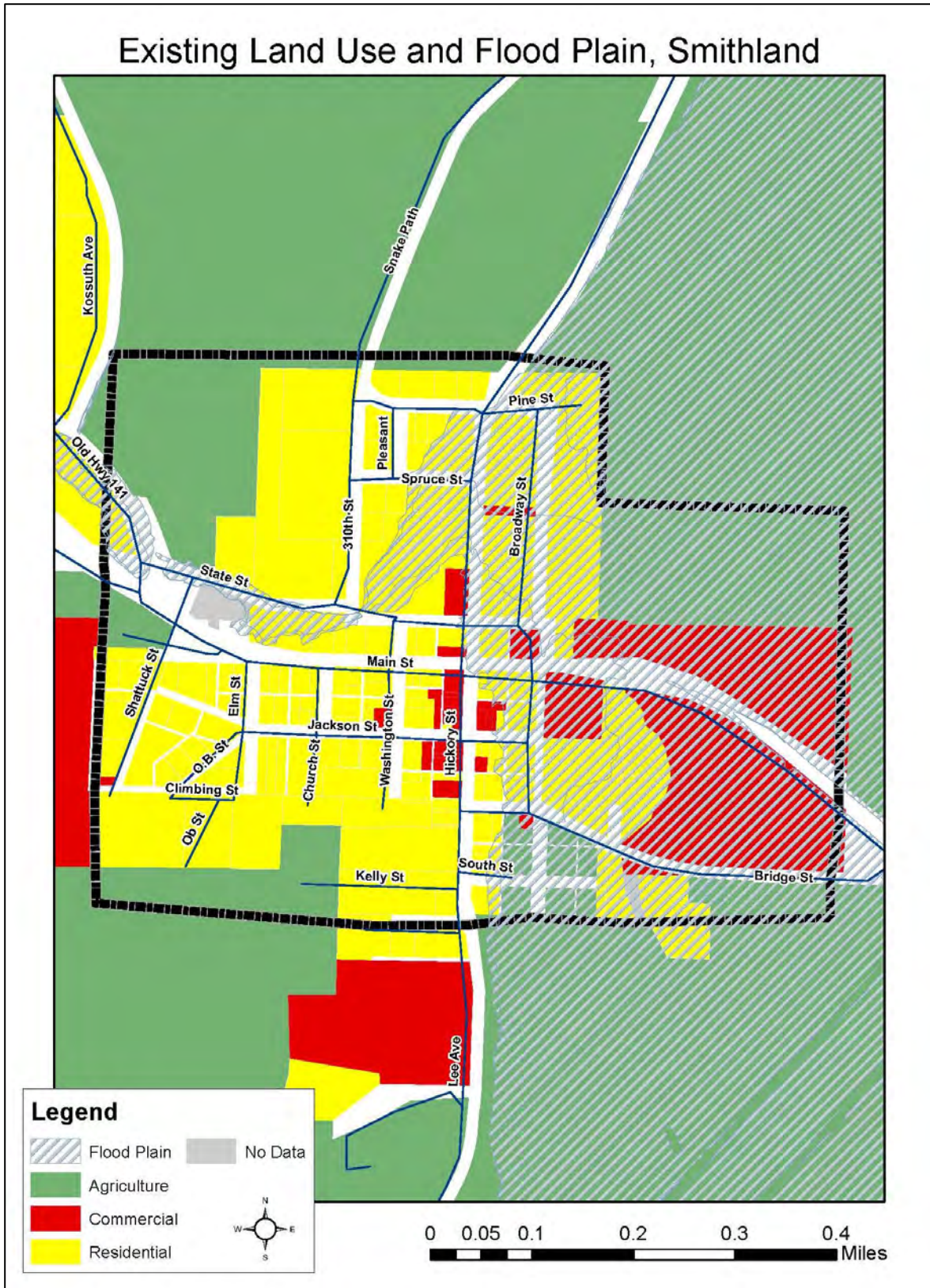
0 0.5 1 2 3 4 Miles

### Existing Land Use and Flood Plain, Sloan



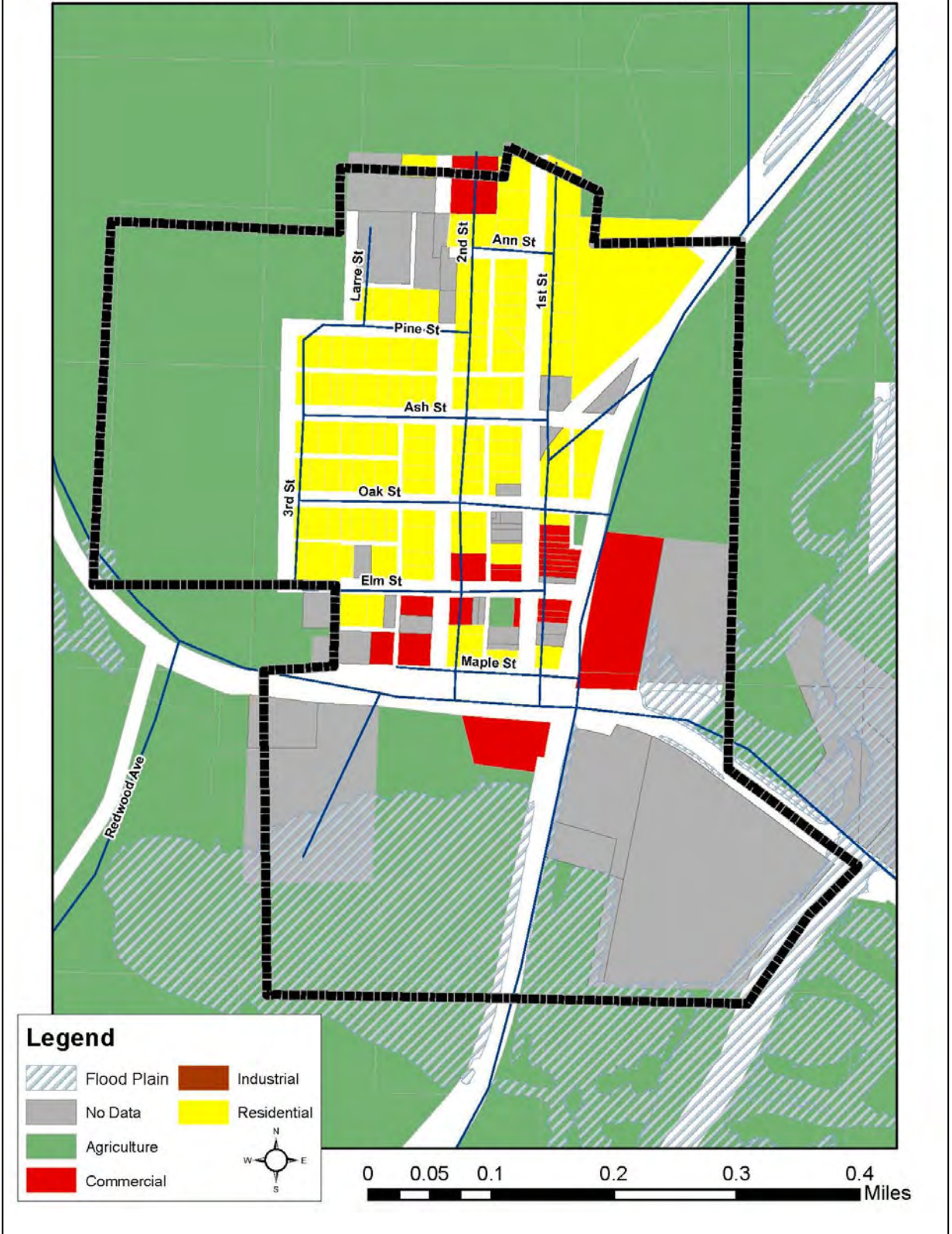


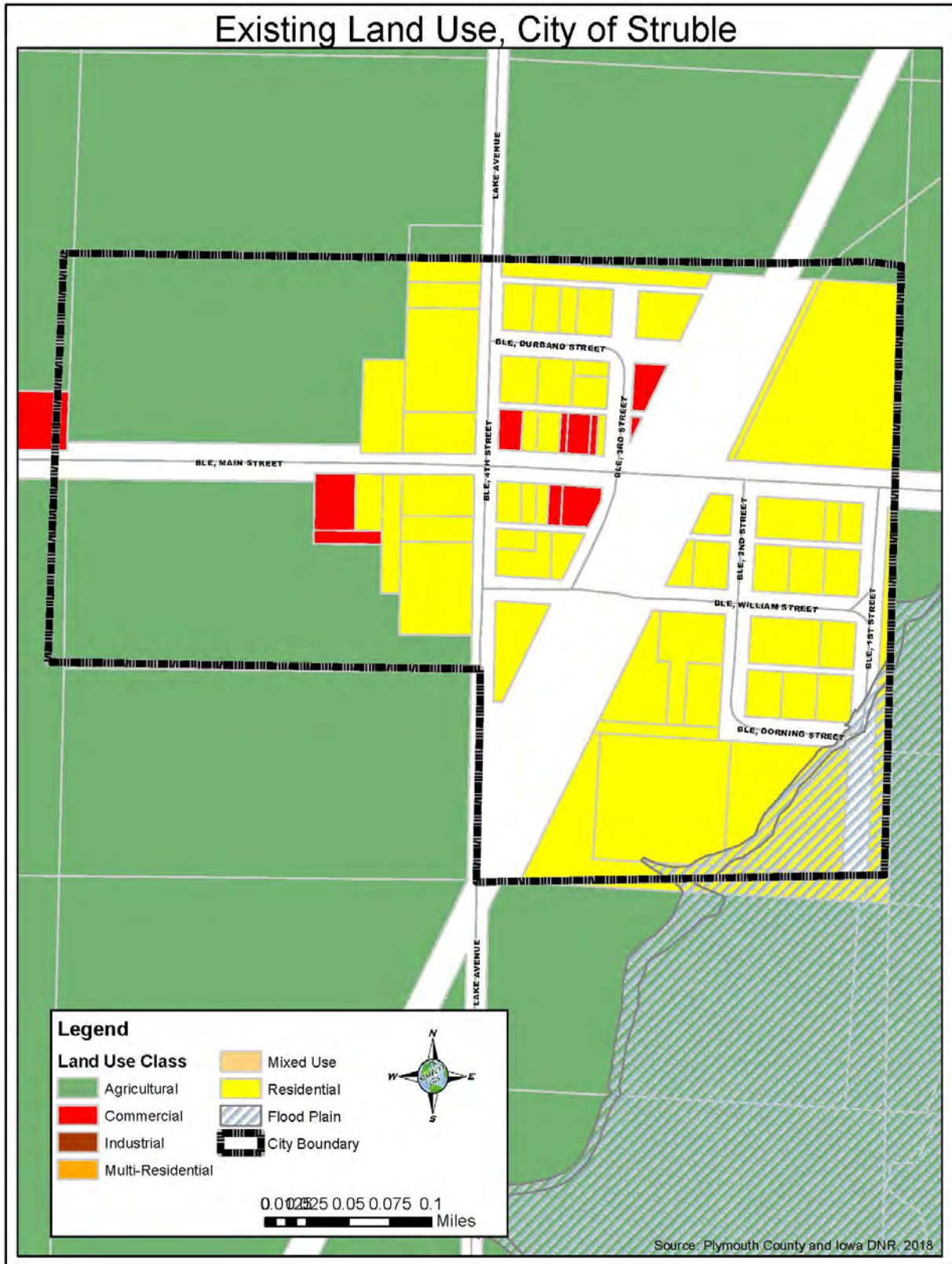
### Existing Land Use and Flood Plain, Smithland



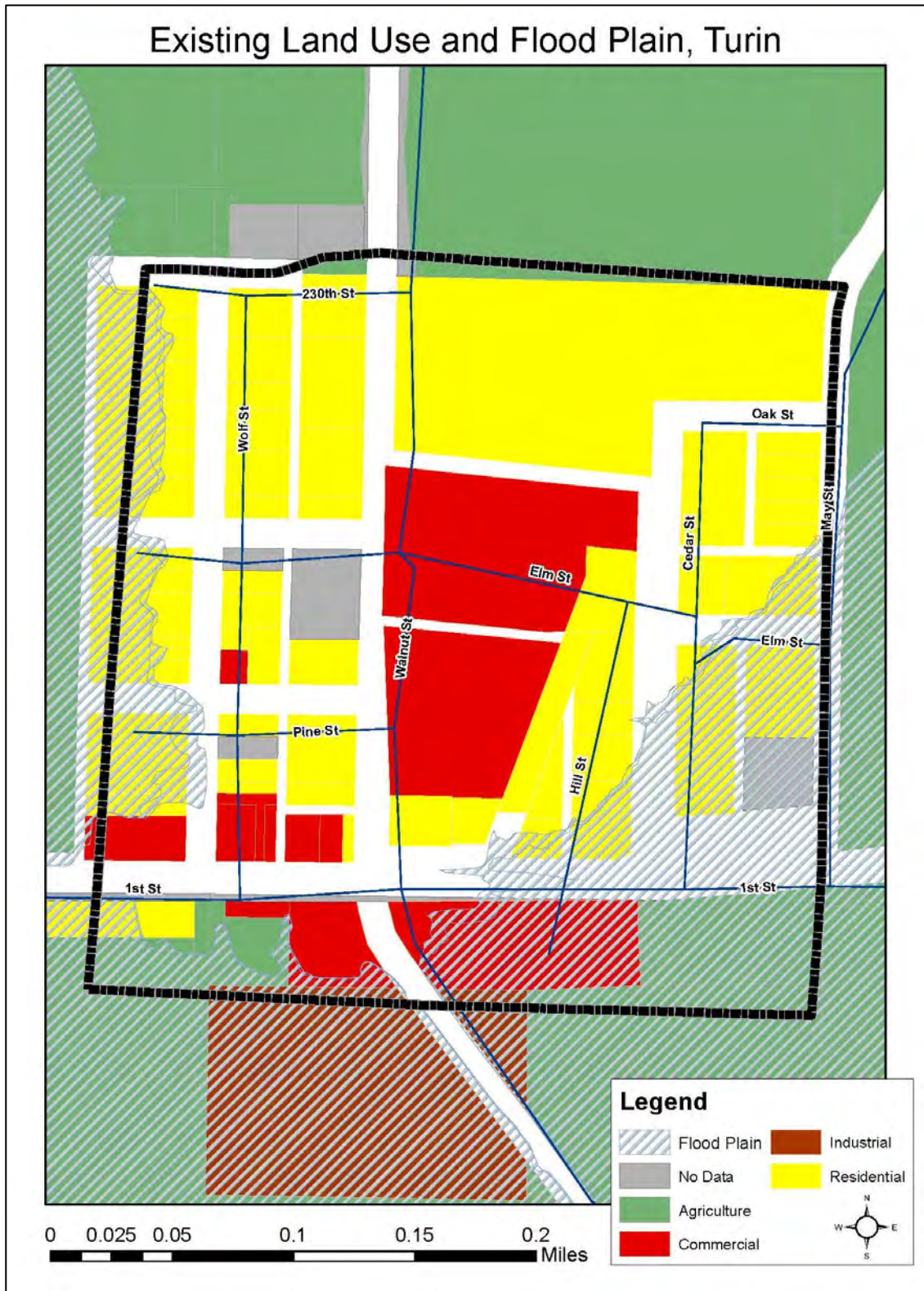


### Existing Land Use and Flood Plain, Soldier

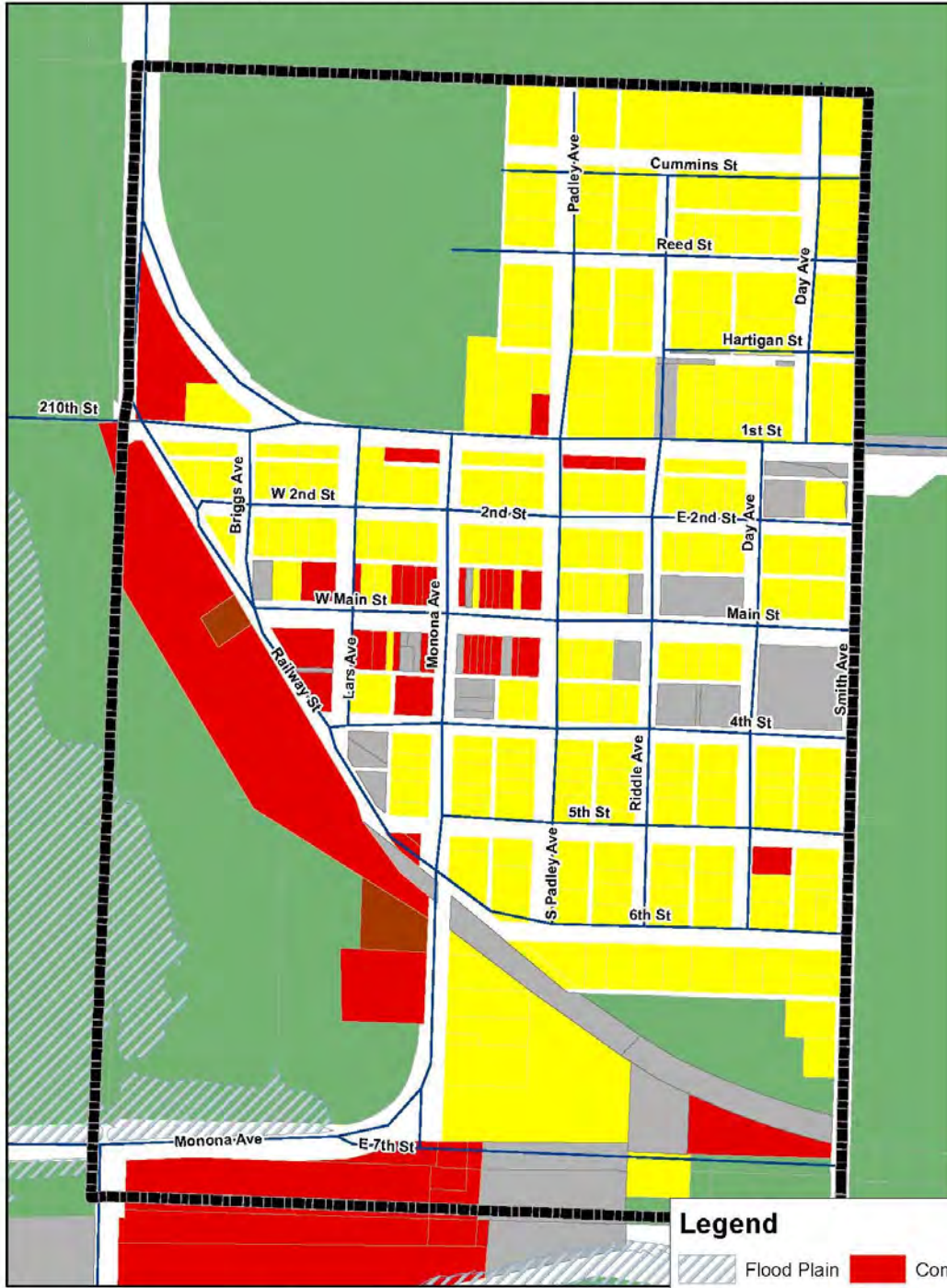




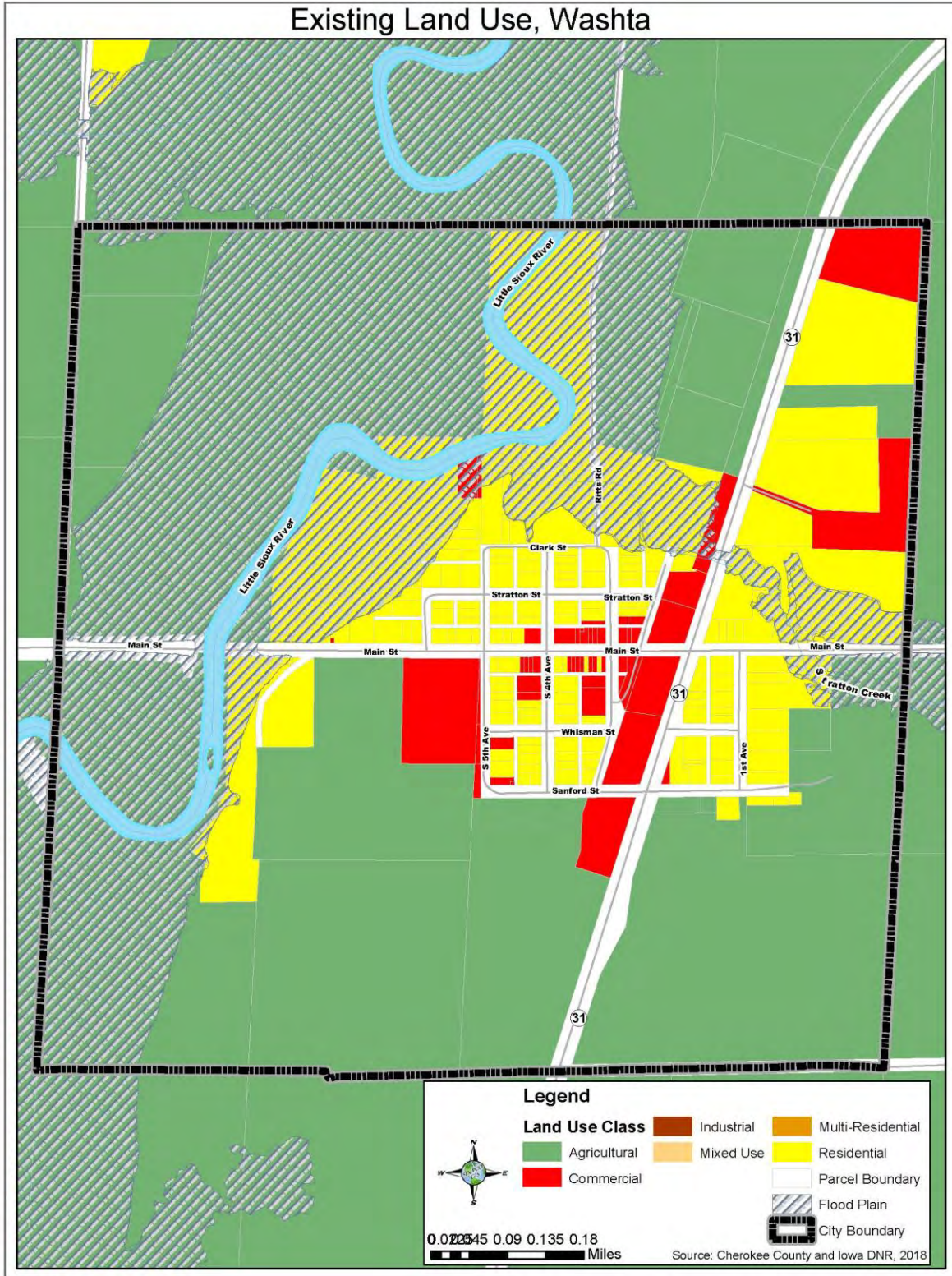




### Existing Land Use and Flood Plain, Ute

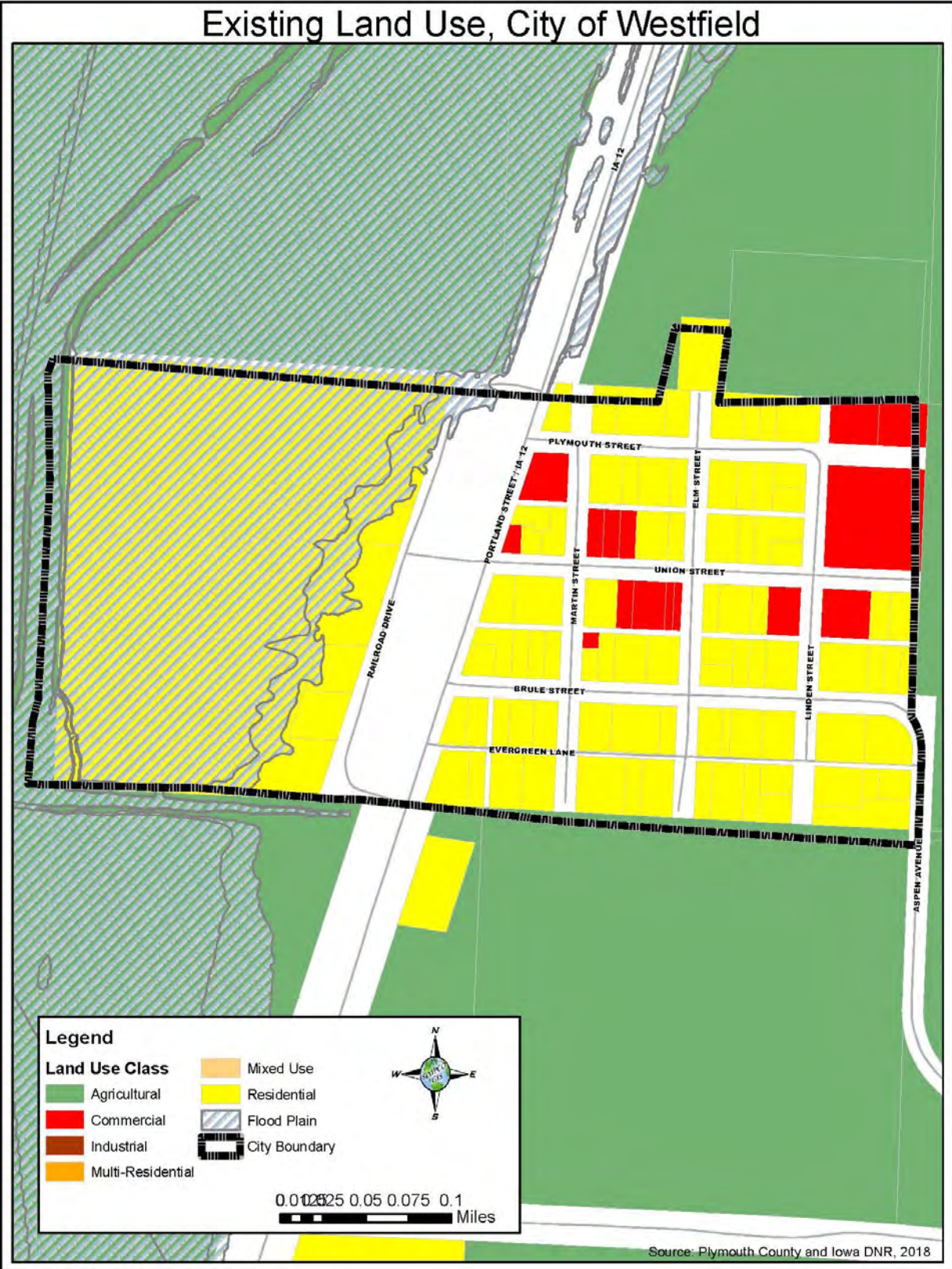






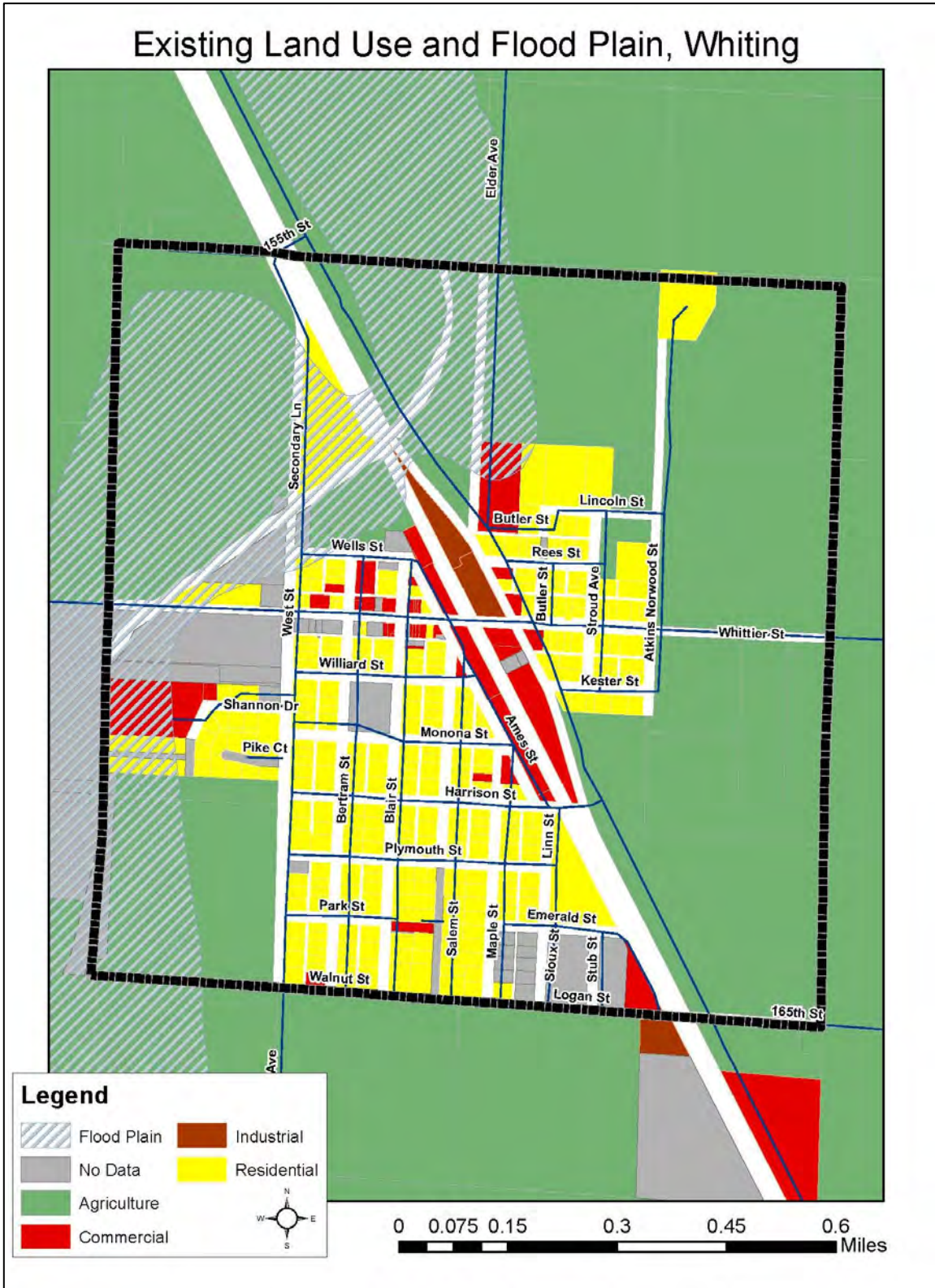


### Existing Land Use, City of Westfield





### Existing Land Use and Flood Plain, Whiting



## VII. Appendices

### A. Appendix A: Glossary of Acronyms and Terms

ACS	American Community Survey (US Census Bureau)
CAAA	Connections Area Agency on Aging
CCEM	Clay County Emergency Management
CFS	Flood of Record Flow
CMI	Crop Moisture Index
County	Cherokee County
CrD	Crop Damages (in NOAA tables)
CSD	Community School District
CSM	Congregate Meal Site
Curr	Current (NOAA Tables)
DFIRM	Digital Flood Insurance Rate Map
Dth	Deaths (in NOAA tables)
EF or EF-Scale	Enhanced Fujita Tornado Scale
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHBM	Flood Hazard Boundary Map
FIRM	Flood Insurance Rate Map
HLSEM	Iowa Homeland Security Emergency Management
HMGP	Hazard Mitigation Grant Program
HUC	Hydrologic Unit Codes
IDNR	Iowa Department of Natural Resources
IaDOT	Iowa Department of Transportation
Init	Initial (NOAA Tables)
Inj	Injuries (in NOAA tables)
Kts	Knots (NOAA Tables)
NCDC	National Climatic Data Center
NFIP	National Flood Insurance Program
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NSSL	National Severe Storms Laboratory
NWIPDC	Northwest Iowa Planning & Development Commission
NWS	National Weather Service

PDSI	Palmer Drought Severity Index
Planning Committee	Hazard Mitigation Planning Committee
PrD	Property Damages (in NOAA tables)
Region	Cherokee, Ida, Monona, Plymouth and Woodbury Counties in Iowa
SCFR	Sioux City Fire Rescue
SCFR HM	Sioux City Fire Rescue - HazMat
SHMT	State Hazard Mitigation Team
SPC	Storm Prediction Center
State	State of Iowa
USDA	US Department of Agriculture
USGS	United States Geological Survey
Hdqtrs or HQ	Headquarters
Bldg	Building
LEPC	Local Emergency Planning Committee
Chke	Cherokee
Mon	Monona
Ply	Plymouth
Wdby	Woodbury

## **B.** Appendix B: Planning Process Documentation

This Appendix includes examples of material used in Plan preparation and development, promoting public input, and recording participation.

- Planning Packet
- Public Input
- Sign-In Sheets

### *Planning Packet*

An example of a blank planning packet as sent to each jurisdiction included the documents as provided. The packets were intended for preparation of, and to guide discussion in, scheduled planning meetings. Record of completed forms is not maintained as documents were intended as a resource and were not mandatory for return.

### *Public Input*

- Signage

Examples of signage used to promote public input opportunities for stand-alone displays are provided for reference. Record of locations that hosted a display is included within the participation summary for respective jurisdictions.

- Questionnaires

The Comment Card questionnaire and Survey Monkey online questionnaire are shown for reference.

*Planning Meeting Sign-in Sheets*

The included sign-in sheets provide record of in-person meetings conducted throughout the planning process. Attendance at meetings conducted via conference calls are noted within the Participation summary of respective jurisdictions.



C. Appendix C: Local Mitigation Plan Review Tool

The review tool as returned by FEMA noting Approved Pending Adoption status..

#### D. Appendix D. Plan Maintenance

For the benefit of participating jurisdictions, guidance on maintaining a current Plan is provided and will be included in communications to jurisdictions when brought to respective Council/Board for adoption. Communities are encouraged to document mitigation efforts as implemented, and to record assessments indicating additional need for mitigation action. The following documents are intended to serve as templates to guide plan adoption and maintenance.

- Resolution to Adopt
  - o County
  - o City
  - o Community School District
- Resolution to Amend
- Progress Report

Resolution to Adopt  
Templates

Resolution to Amend  
Template

Progress Reporting Form  
Template



Iowa Homeland Security and Emergency Management	<a href="http://www.iowahomelandsecurity.org">http://www.iowahomelandsecurity.org</a>
Iowa State Hazard Mitigation Plan	
Merriam-Webster	<a href="https://www.merriam-webster.com/">https://www.merriam-webster.com/</a>
National Drought Mitigation Center	<a href="http://drought.unl.edu">http://drought.unl.edu</a>
Drought Impact Reporter	<a href="http://www.droughtreporter.unl.edu">http://www.droughtreporter.unl.edu</a>
Drought Monitor	<a href="http://drought.unl.edu/dm/monitor.html">http://drought.unl.edu/dm/monitor.html</a>
National Historic Registry	<a href="http://www.nps.gov/nr">http://www.nps.gov/nr</a>
National Oceanic Atmospheric Administration (NOAA)	<a href="http://www.noaa.gov/">http://www.noaa.gov/</a>
National Centers for Environmental Information	<a href="http://www.ncdc.noaa.gov">http://www.ncdc.noaa.gov</a>
National Environmental Satellite, Data, and Information Service (NESDIS)	<a href="http://www.nesdis.noaa.gov/">http://www.nesdis.noaa.gov/</a>
Storm Prediction Center Statistics	<a href="http://www.spc.noaa.gov">http://www.spc.noaa.gov</a>
Natural Resources Conservation Service (NRCS)	<a href="http://www.ia.nrcs.usda.gov">www.ia.nrcs.usda.gov</a>
Ready Iowa (Nuclear Power Plants)	<a href="https://www.beready.iowa.gov/be_aware/nuclear_plants.html">https://www.beready.iowa.gov/be_aware/nuclear_plants.html</a>
Siouxland District Health Department	<a href="http://www.siouxlanddistricthealth.org">www.siouxlanddistricthealth.org</a>
SIMPCO - SRTPA Transportation Improvement Programs	<a href="http://www.simpco.org">www.simpco.org</a>
State Summaries	<a href="https://statesummaries.ncics.org/chapter/ia/">https://statesummaries.ncics.org/chapter/ia/</a>
States at Risk	<a href="https://statesatrisk.org/iowa/all">https://statesatrisk.org/iowa/all</a>
United States Census Bureau	<a href="http://www.census.gov">http://www.census.gov</a>
American Community Survey Data	<a href="https://www.census.gov/programs-surveys/acs">https://www.census.gov/programs-surveys/acs</a>
Quick Facts	<a href="https://www.census.gov/quickfacts/fact/table/US/PST045219">https://www.census.gov/quickfacts/fact/table/US/PST045219</a>
United States Department of Agriculture (USDA)	<a href="http://www.usda.gov">http://www.usda.gov</a>
The Census of Agriculture	<a href="http://www.agcensus.usda.gov/">http://www.agcensus.usda.gov/</a>
National Agricultural Statistics Service (NASS)	<a href="http://www.nass.usda.gov/">http://www.nass.usda.gov/</a>
United States Department of Agriculture – Risk Assessment Agency (RMA)	<a href="http://www.rma.usda.gov">http://www.rma.usda.gov</a>
United States Department of Commerce	<a href="http://www.commerce.gov/">http://www.commerce.gov/</a>
United States Geological Survey (USGS)	<a href="http://www.usgs.gov/">http://www.usgs.gov/</a>
United States Small Business Administration	<a href="http://www.sba.gov">http://www.sba.gov</a>
USA Today	<a href="https://www.usatoday.com/">https://www.usatoday.com/</a>
USA.com - Local Data Search	<a href="http://www.usa.com/">http://www.usa.com/</a>
USFS - WildFire Assessment System	<a href="http://www.wfas.net/">http://www.wfas.net/</a>

### **State and Federal Resources**

Stream Maintenance Program	Iowa Department of Natural Resources
Engineering Studies for Streams	

Floodplain Development Management		
State Planning Agencies		ICOG
		Iowa League of Cities
<b>Regional Resources (including Membership-Based Services; Documents)</b>		
Economic Development Plan		SIMPCO Comprehensive Economic Development Strategy (CEDS)
Transportation Plan	2045 Siouxland Regional Transportation Planning Association Long Range Transportation Plan	
Regional Planning Agencies/Committees/Groups		SIMPCO
		Region IV Hazardous Materials Response Commission
		Region IV LEPC
2020 Regional Hazard Mitigation Plan		<a href="https://simpco.org/divisions/community-development">https://simpco.org/divisions/community-development</a>
2018 Hazardous Materials Commodity Flow Study		<i>Not available for public access</i>
Region IV LEPC Field Map App		<i>Not available for public access</i>
<b>Uniform County Resources</b>		
Emergency Management Agency & Programming		Emergency Management Coordinator
		County Recovery Plan
		County Conservation Board
		County Emergency Plan
<b>Funding Resources</b>		
CDBG	County Specific Funding Opportunities	
HMEP	Cherokee County Legacy Foundation	
SRF	Ida County Community Betterment Foundation	
TAP	Monona County Community Partners Foundation	
USDA	The Community Foundation of Greater Plymouth County	
Firefighters Support Foundation	Missouri River Historical Development Grants (Wdby Co)	
Gilchrist	Iowa West Foundation (Monona)	
Flight 232 Fund	<a href="#">United Airlines Trust Fund – Grant Application</a>	
Grants.gov	<a href="https://www.grants.gov/web/grants/search-grants.html">https://www.grants.gov/web/grants/search-grants.html</a>	
<b>County-Specific Resources</b>		
Economic Development Plan/Strategy		Cherokee Area Economic Development Corporation
		Monona County Economic Development Partnership for Growth