



**ARLINGTON CITY COUNCIL
MEETING AGENDA
November 7, 2022, AT 6:30 PM
COUNCIL CHAMBERS**

The City Council is provided background information for agenda items in advance by city staff, committees, and boards. Many decisions regarding agenda items are based upon this information, as well as: City policy and practices, input from constituents, questions or information that has not yet been presented or discussed regarding an agenda item. If you have a concern or question, please ask to be recognized by the Mayor during the "Citizens addressing the Council" portion of the agenda- state your name and address for the record. Please keep comments under 5 minutes. Individuals wishing to speak for more than five minutes should ask to be included on the agenda in advance. All comments are appreciated, but please refrain from personal or derogatory attacks on individual.

1. Call Meeting to Order and Pledge of Allegiance
2. Roll Call
3. Approve the Agenda and any Agenda Additions
4. Addressing the Council

CONSENT AGENDA

5. Approval of Consent Agenda
 - A) Approval of Bills
 - B) October 17, 2022 Workshop Meeting Minutes
 - C) October 17, 2022, Meeting Minutes
 - D) November 3, 2022 Personnel Meeting Minutes

PETITIONS, REQUESTS & COMMUNICATIONS

6. Resignation of Piper Whitmore-Schatz as an EMR from the Arlington Ambulance

7. Resignation of Ross Arneson as City Attorney
8. MMPA Public Summary October 2022
9. MMPA Rate Adjustment for November 2022
10. MMPA Statement of Net Position
11. MMPA Statements of Revenues, Expenses and Changes in Net Positions
12. MMPA-Xcel Investor Relations Presentation September 28, 2022
13. CenterPointe- gas meter notice

REPORTS OF OFFICERS, BOARDS AND COMMITTEES

14. October Ambulance Report-Ambulance Director Jamie Weikle
15. October Library Report-Library Director Andy Kelton
 - Approve hiring Ardis Husefeldt, Pat Gribitzke and Kathy Bierstedt at \$13 an hour
16. October Public Works Report-Public Works Supt. Kirby Weckworth
17. Review Revenue, Expenditure & Investment Summaries- September 2022

ORDINANCES AND RESOLUTIONS

18. FIRST READING OF ORDINANCE NO. 346 AN ORDINANCE AMENDING CHAPTER 6: NUISANCES

19. Resolution 62-2022 A RESOLUTION APPROVING TERMS OF A LOAN TO GWEN SCHARPE FROM THE ARLINGTON EDA CHILD CARE LOAN PROGRAM.

20. Resolution 63-2022 A RESOLUTION ACCEPTING A DONATION AND DESIGNATING ITS USE

21. Resolution 64-2022 A RESOLUTION RELATING TO DESIGNATING A COMBINED POLLING PLACE LOCATION FOR ALL ELECTIONS IN 2023

UNFINISHED BUSINESS

22. Discussion on Tony Hoff Property-People Service Lee Forcier

23. Resolution 59-2022 A RESOLUTION ADOPTING THE SIBLEY COUNTY ALL-HAZARD MITIGATION PLAN

NEW BUSINESS

24. Approve/Deny Recommendation of the Personnel Committee to amend section 7.2 On Call Hours of the Personnel Policy

25. Approve WAC/SAC waiver for 237 Frenzel Drive

26. Approve/Deny Pay request No. 7 from Gridor Construction for \$344,382.60

27. Set Date for Special Council Meeting-Canvas General Election Results-Nov 14-18

28. Discussion on Northland Drying Smell

29. New Administrator Search Timeline

30. Approve/Deny Updated Operations and Maintenance Agreement with People Service

31. Discussion on having the City Council Appointee a voting member of the Hospital Board

32. Approve/Deny Arli-Dazzle Parade Route, 5K Route and Request for City Assistance

MISCELLANEOUS BUSINESS

ADJOURNMENT

Reminders:

November 14- EDA Meeting at 5:30pm

November 21-City Council Meeting at 6:30pm



**ARLINGTON CITY COUNCIL
WORKSHOP MINUTES
October 17, 2022, AT 5:30 PM
COUNCIL CHAMBERS**

1. Call Meeting to Order-Meeting was called to order by Mayor Nagel at 5:30pm.

2. Roll Call-
Members Present-Mayor Richard Nagel, Matt Scharpe, Dave Meyer, Joe Morgan, John Thomes, Michelle Battcher, Atty. Ross Arneson
Members Absent-none
Staff Present-City Administrator Amy Newsom, Police Chief Glenn Gerads, Ambulance Manager Jamie Weikle, Fire Chief Doug Mackenthun, Library Director Andy Kelton
Guests-Kurt Menk *Arlington Enterprise*, Northland Drying's Attorney Gunnar Johnson

3. Discussion on Budget Cuts-Morgan commented that council raises could be cut. Meyer thought that the 4th Officer could be cut. Morgan and wondered about using parttime officers instead of fulltime officers. Battcher is in favor of cutting the 4th Officer.

Weikle stated that she would be dropping down to 3-12 shifts per week effective December 1, 2022. She will be keeping her title. Gerads stated that people do want to come to smaller communities. He also said that he can find people.

4. Adjournment-Motion to adjourn the meeting by Thomes at 6:09pm. Seconded by Battcher. Motion carried.



**ARLINGTON CITY COUNCIL
MEETING MINUTES
October 17, 2022, AT 6:30 PM
COUNCIL CHAMBERS**

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1. Call Meeting to Order and Pledge of Allegiance-Meeting was called to order at 6:30pm by Mayor Nagel. All stood for the Pledge of Allegiance.

2. Roll Call-

Members Present-Mayor Richard Nagel, Atty. Ross Arneson, Michelle Battcher, Dave Meyer, Matt Scharpe, Joe Morgan, John Thomes

Members Absent-none

Staff Present-City Administrator Amy Newsom, Police Chief Glenn Gerads, Fire Chief Doug Mackenthun, Ambulance Director Jamie Weikle, Library Director Andy Kelton, P & Z Administrator Phil Mangis, Admin. Assist. /EC Coordinator Gwen Scharpe, People Service Lee Forcier

Guests-Kurt Menk *Arlington Enterprise*, Erik Lindemeier, Brandon Bracht, Amy Berger, Stacy Hoechst, Lisa Pasvogel, Kim Quast, Linda Haupt, Jodi Anderson, Amy Sutherland, Spencer Haggemiller, Tim Haggemiller, Curt Reetz, Bobbi Zaske, Curtis Ling, Northland Drying's Attorney Gunnar Johnson

3. Approve the Agenda and any Agenda Additions-Scharpe made a motion to approve the agenda with the following addition. Morgan seconded. Motion carried.

14.5 Resolution 61-2022 A RESOLUTION APPROVING A DONATION AND DESIGNATING ITS USE

4. Addressing the Council-Pasvogel wanted to know how the chain of command works with regards to Mayor/Council/City Administrator and why the Council is not receiving the information from the public like they should be. Berger stated that the Hospital isn't able to run the clean air circulation/return due to the smell coming from Northland Drying. Bracht asked about the fields being mowed by his house and spoke about the concrete curb in front of his house.

CONSENT AGENDA

Morgan made a motion to approve the consent agenda.

5. Approval of Consent Agenda
 - A) Approval of Bills
 - B) October 3, 2022, Meeting Minutes
 - C) Approve closing of Main Street on October 31, 2022 (4:30pm-7pm) from Railroad tracks to Hwy. 5 for Trick or Treat on Main Street formerly known as Fright Night
 - D) Approve On Sale Liquor License for Dietel Inc.

Thomes seconded. Motion carried.

PETITIONS, REQUESTS & COMMUNICATIONS

6. Resignation of City Administrator Amy Newsom
7. Resignation of Planning and Zoning Administrator Phil Mangis
8. Meeting to discuss policing and safety in Sibley County
 - Sibley County Courthouse Basement October 31, 2022, at 10 am

REPORTS OF OFFICERS, BOARDS AND COMMITTEES

9. September Fire Department Report-Fire Chief Doug Mackenthun
 - Fire Relief Update-Spencer Haggenmiller-Secretary

Mackenthun reported that the FD had a truck in the Homecoming parade. He said that the pork chop dinner went well, and he has 2 new recruits that will be heading to class in November.

S. Haggenmiller gave an update on the Fire Relief. He said that the relief is to go towards Fire Department members that retire and is their pension. He said that there are currently 26 members on the department, however three of them are part time members and are not eligible for the pension. He reported that the Fire Relief was about \$30,000 short of their goal for this year.

T. Haggenmiller reported that they have pull tabs at the Arlington Haus, did very well with the pork chop dinner, gave to two trap shooting groups, prom and cancer cruise and will also have pull tabs in the bowling alley once they become fully operational.

10. September Police Department Report- Police Chief Glenn Gerads-Chief Gerads stated that new Officer Legg is officially out on his own. He also stated that currently he is backgrounding someone to replace Officer Lenertz as he is no longer here. Nagel asked about the speed sign not being out lately. Gerads said that it wasn't working for a while but is no and will be put out. Gerads also reported that the PD will be assisting with the Trick or Treat on Main Street event.
11. September P & Z Report-P & Z Administrator Phil Mangis-Mangis stated that his last day is Nov.6th and that AMBA Homes is still working on an easement for that property. He also stated that they have permits coming in and received a permit for a sign.
12. September O & M Report-People Service Lee Forcier-Forcier reported that People Service had nine service requests in September, removed and read the Arlington Raceway meter for the winter along with the bull riding/camper meter, a total of 16 Gopher State One locates, and talked about the water treatment plant.

ORDINANCES AND RESOLUTIONS

13. Resolution 59-2022 A RESOLUTION ADOPTING THE SIBLEY COUNTY ALL-HAZARD MITIGATION PLAN
Battcher made a motion to table this so that she can read through the plan. Thomes seconded. Motion carried.
Battcher, Scharpe, Thomes, Morgan and Meyer voted in favor. None against. None abstained. None were absent.

14. Resolution 60-2022 A RESOLUTION APPROVING THE APPLICATION FOR A LAWFUL GAMBLING PERMIT FOR PHEASANTS FOREVER

Battcher made a motion to approve resolution 60-2022. Thomes seconded. Motion carried.

Battcher, Scharpe, Thomes, Morgan and Meyer voted in favor. None against. None abstained. None were absent.

14.5 Resolution 61-2022 A RESOLUTION APPROVING A DONATION AND DESIGNATING ITS USE

Battcher asked if thank you's are being sent out for donations. She would like to see this happen.

Thomes made a motion to approve Resolution 61-2022. Meyer seconded. Motion carried. Battcher, Scharpe, Morgan, Thomes and Meyer voted in favor. None against. None abstained. None were absent.

UNFINISHED BUSINESS

NEW BUSINESS

15. Approve/Deny Contract with Shirley Slater-Schulte for Interim City Administrator at \$85/hour plus expenses-Discussion was had regarding wage, max hours per week and what the expenses were. Arneson to clarify the contract and put in for \$80/hour with a maximum of 24 hours per week and hotel/motel stays only on nights where meetings run late.

Scharpe made a motion to accept the contract as it is presented, however motion was dead do to the Council due to a lack of a second and the Council wanting more clarification. Morgan thought that the position should be advertised so that the City can find a new Administrator.

Battcher made a motion to approve the contract for \$80/hour with the clarifications from Arneson. Scharpe seconded. Motion carried.

16. Approve/Deny recommendation from EDA for agreement for consulting services with Amy Newsom for EDA Director at \$75/hour with no additional expenses
Battcher would like to see what other options are available. She felt that this should not have been put on the agenda, and there is no proactive discussion prior to this meeting.
Scharpe made a motion to approve the contract for consulting services with Amy Newsom for EDA Director. Morgan seconded. Motion carried. Scharpe, Thomes, Morgan and Meyer voted in favor. Battcher voted against. This was a 4-1 vote.

17. Approve/Deny \$80,500 for redevelopment at DMI (Deed Redevelopment grant match)
Morgan made a motion to approve the \$80,500 grant match for DMI to come out of EDA funds. Thomes seconded. Motion carried with a 5-0 vote.

18. Approve/Deny Agreement for Consulting Services with Phil Mangis for Planning and Zoning Administrator at \$50/hour with no additional expenses-
The Council would like the Planning and Zoning committee to meet and weigh in before approving a contract with Phil Mangis.
Battcher made a motion to table this contract until the Planning and Zoning committee can meet to discuss. Meyer seconded. Motion carried with a 5-0 vote.

19. Approve/Deny Proposal for Executive search for City Administrator with SCSC at a cost \$10,150
Scharpe made a motion to approve and not to exceed the \$10,150 proposal from SCSC for an Executive search for a City Administrator. Battcher seconded. Motion carried with a 5-0 vote.

20. Discussion on Erik Lindemeier Property-Chief Gerads said that this started out as a complaint at 307 7th Ave NW. After discussion from the council, Chief Gerads and Erik Lindemeier it was determined that the property is still in violation of the City Ordinance, and it affects the neighbors and their property values. The citations will not be dropped but rather enforced according to Council decision.

21. Discussion on complaints regarding Northland Drying-Northland Drying's Atty. Gunner Johnson (Hermantown and Duluth City Attorney) was on hand for discussion. He wanted to hear from Council and residents regarding their complaints, comments and he gave a brief update on what has been done so far. He will bring back the particulate issue to Northland Drying as it is the most important issue at the moment and will try to have Northland Drying communicate better.

Pasvogel stated that Northland Drying has had multiple attorneys over the years with the same story. She doesn't feel that they are doing a good job. She asked if a timeline could be set. Berger asked if he had looked at all of the junk on the Northland Drying property. Morgan felt that there should have been a representative from the Hospital at this meeting making the complaint and also stated that it is in the best interest of Northland Drying to improve their image.

MISCELLANEOUS BUSINESS

Discussion on Tony Hoff Property-Council decided to push this to the next agenda.

ADJOURNMENT

Thomes made a motion to adjourn the meeting at 9:08pm. Meyer seconded. Motion carried.

City Administrator Amy Newsom

Mayor Richard Nagel

Gwen Scharpe

From: Jaime Weikle
Sent: Wednesday, October 19, 2022 11:45 AM
To: Gwen Scharpe
Subject: FW: Resignation

Jaime Weikle, NRP, CADS
Arlington Area Ambulance Manager

Office: 507-964-2828
Cell: 612-357-2749
Fax: 507-964-5973
jweikle@arlingtonmn.com



City of Arlington
204 Shamrock Drive
Arlington, MN 55307

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From: [Piper Whitmore-Schatz](#)
Sent: Tuesday, October 18, 2022 6:55 PM
To: [Jaime Weikle](#)
Subject: Resignation

I regret to inform you that I will be buying out of my contract and will no longer be with Arlington Ambulance. If you could let me know how much I owe for the schooling, so I can drop off a check of said amount. I will continue out the shifts currently scheduled if needed just let me know, I will not be adding on any additional shifts. My last scheduled shifts are this weekend 10/22 and 10/23. After these scheduled shifts are done with I will drop the payment off.

If you have any questions you can email me back at this address.

Thanks for the opportunity you have given me,
Piper Whitmore-Schatz

From: Heather Arneson

Sent: Tuesday, November 1, 2022 3:50 PM

To: Amy Newsom; Joe Morgan; Matthew Scharpe; Michelle Battcher; Rich Nagel; John Thomes; Dave Meyer

Subject: City Attorney Retirement

Everyone:

For some time, I have been considering retirement. I made it known to various people, but this email will mark my official notice of it.

As part of my retirement plans, I have decided to withdraw from consideration to be re-appointed City Attorney for 2023. The arrangement has been that the Mayor appoints me at the beginning of the year for that calendar year. My current appointment expires December 31, 2022. Please consider that to be my last day of service as City Attorney.

I hope to find a law firm to take over my law office, to provide continued service to the community. I am still pursuing possibilities, but do not have a replacement at this time.

I will be available in the future to help a new City Attorney during a transitional term.

It has been an honor to serve the city all these years, and I have greatly enjoyed working with all of you. You have served your community well.

Thanks,

Ross R. Arneson

Arlington City Attorney

Arneson Law Office

302 West Main, P.O. Box 529

Arlington, MN 55307

Phone: 507-964-5753

Email: ross@arnesonlegal.com

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Gwen Scharpe

From: Amy Newsom
Sent: Thursday, November 3, 2022 2:16 PM
To: Gwen Scharpe
Subject: FW: MMPA Board Meeting Public Summary - October 2022

From: David W. Niles <David.Niles@avantenergy.com>
Sent: Wednesday, November 2, 2022 1:23 PM
To: David W. Niles <David.Niles@avantenergy.com>
Subject: MMPA Board Meeting Public Summary - October 2022

Good afternoon,

The public summary of the October 2022 MMPA Board of Directors meeting is below.

The Board of Directors of the Minnesota Municipal Power Agency (MMPA) met on October 25, 2022, at Chaska City Hall in Chaska, Minnesota and via videoconference.

The Board reviewed the Agency's financial and operating performance for September 2022.

The Board discussed the current business environment.

The Board discussed the status of renewable projects the Agency is pursuing.

It was reported that eight of 12 MMPA members have extended their power sales agreements through 2060. The eight that have extended represent approximately 74% of MMPA's energy sales.

Customer penetration for the residential Clean Energy Choice program increased to 4.1%. There was an increase of 70 customers participating in the residential Clean Energy Choice program from August to September.

Have a wonderful day!

Thanks,

-David

Gwen Scharpe

From: Amy Newsom
Sent: Thursday, November 3, 2022 2:20 PM
To: Gwen Scharpe
Subject: FW: MMPA Energy Adjustment Clause for November 2022

From: David W. Niles <David.Niles@avantenergy.com>
Sent: Wednesday, November 2, 2022 4:00 PM
To: David W. Niles <David.Niles@avantenergy.com>
Subject: MMPA Energy Adjustment Clause for November 2022

Good afternoon,

The average rate to MMPA members for November is projected to be \$1.79 per MWh lower than the October rate.

The projected rate is \$83.49 per MWh. This is the third lowest rate of 2022.

This is 11.5% lower than Xcel's projected rate of \$94.37 per MWh.

This results in an EAC to members of \$0.02206 per kWh for the month of November.

Thanks, and have a great day!

-David W. Niles
Senior Vice President
Avant Energy, Inc.
220 South Sixth Street, Suite 1300
Minneapolis, MN 55402
(612) 252-6531 Direct

Minnesota Municipal Power Agency
Statement of Net Position
As of September 30, 2022 - Unaudited

Assets and Deferred Outflows of Resources

Current Assets

Cash and cash equivalents	\$ 80,673,816
Restricted cash and cash equivalents	12,230,272
Accrued interest receivable	177,731
Power sales and other receivables	18,152,609
Fuel inventory	1,478,270
Plant inventory - spares	3,884,443
Prepaid expenses	1,136,398
Total current assets	<u>117,733,539</u>

Noncurrent Assets

Capital assets	
Electric generation assets	433,628,607
Land	10,893,841
Less: accumulated depreciation	<u>(184,580,057)</u>
Property and equipment, net	259,942,391
Construction in progress	<u>8,937,693</u>
Total capital assets, net	<u>268,880,084</u>
Restricted cash, cash equivalents, and investments	10,338,259
Prepaid expenses	487,140
Future recoverable costs	<u>42,112,478</u>
Total noncurrent assets	<u>321,817,961</u>
Total assets	<u>439,551,500</u>

Deferred Outflows of Resources

Deferred outflows of resources - other	<u>1,008,407</u>
Total assets and deferred outflows of resources	<u>\$ 440,559,907</u>

Liabilities, Deferred Inflows of Resources and Net Position

Current Liabilities

Accounts payable and accrued liabilities	\$ 13,892,785
Accrued interest payable	3,616,940
Long-term debt due within one year	8,613,333
Capital lease liability due within one year	<u>1,330,106</u>
Total current liabilities	<u>27,453,164</u>

Noncurrent Liabilities

Long-term debt, net	166,628,124
Capital lease liability, net	<u>12,976,043</u>
Total noncurrent liabilities	<u>179,604,167</u>
Total liabilities	207,057,331

Deferred Inflows of Resources

Rate stabilization	28,671,000
Other	<u>12,987,828</u>
Total liabilities and deferred inflows of resources	<u>248,716,159</u>

Net Position

Net investment in capital assets	90,416,667
Restricted for debt service	12,230,273
Unrestricted	<u>89,196,808</u>
Total net position	<u>191,843,748</u>
Total liabilities and deferred inflows of resources and net position	<u>\$ 440,559,907</u>

Minnesota Municipal Power Agency
Statements of Revenues, Expenses and Changes in Net Position
YTD September 30, 2022 - Unaudited

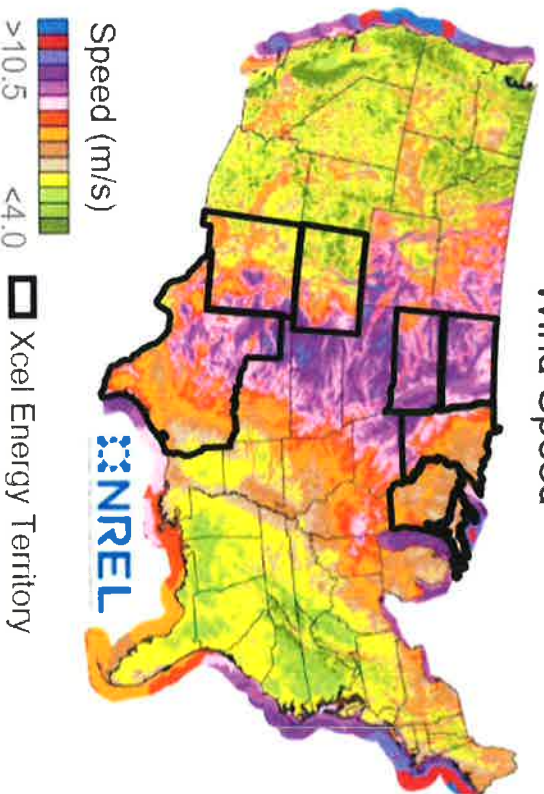
Operating Revenues	
Power sales to members	\$ 140,890,418
Power sales to non-members	1,178,462
Total operating revenues	<u>142,068,880</u>
Operating Expenses	
Power acquisition expense	67,703,500
Transmission	21,280,695
Other operating expenses	22,314,774
Depreciation	12,007,331
Total operating expenses	<u>123,306,300</u>
Operating income (loss)	<u>18,762,580</u>
Nonoperating Revenues (Expenses)	
Interest expense	(5,269,089)
Investment income	759,658
Net (decrease) increase in the fair value of investments	(714,099)
Gain on sale of investments	129,129
Total nonoperating revenues (expenses), net	<u>(5,094,401)</u>
Change in net position before future recoverable costs	13,668,179
Future Recoverable Costs	<u>(5,297,432)</u>
Change in net position	8,370,747
Net Position, Beginning of Year	<u>183,473,001</u>
Net Position, September 30, 2022	<u>\$ 191,843,748</u>

STEEL FOR FUEL ADVANTAGE

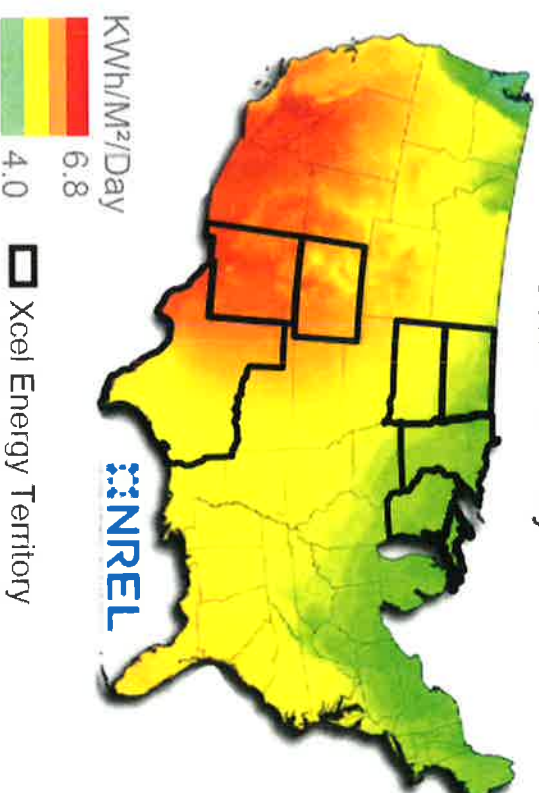
Geographic Advantage for Renewables

High Capacity Factors Enable Greater Efficiency and Lower Costs

Wind Speed



Solar Intensity

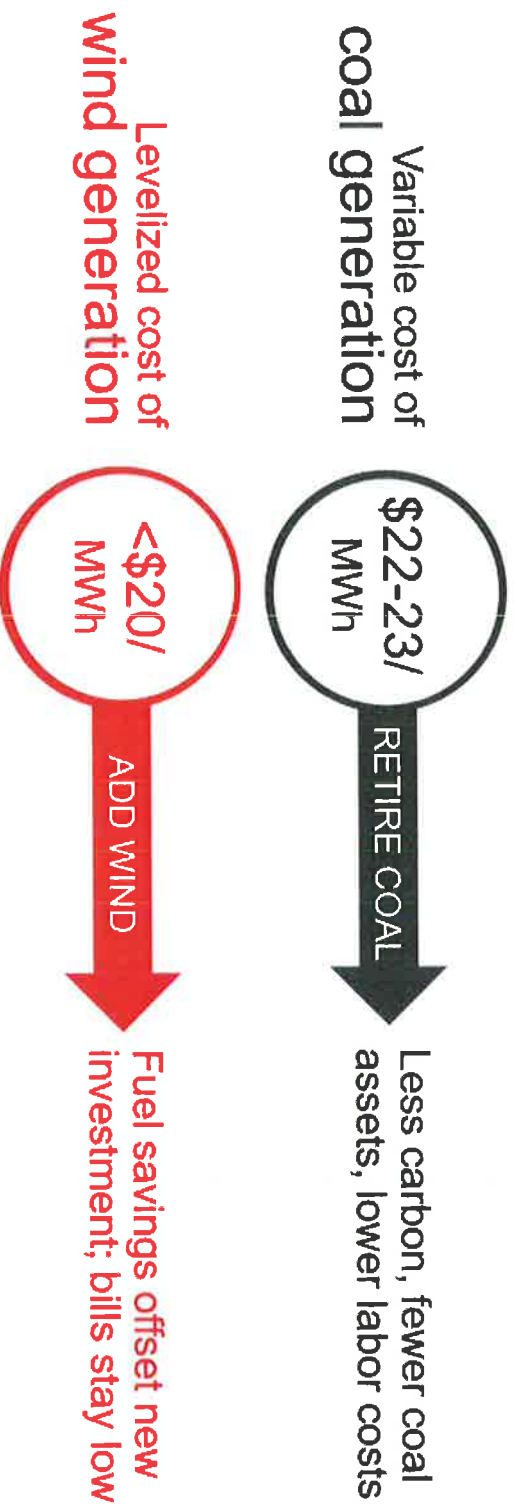




ESSENTIAL
Wolfe Research Conference
September 28, 2022

Steel for Fuel - Attractive Economics for Renewables

Replacing Coal with Lower-Cost Wind



Over 3,600 MW **X** 8,760 Hours/year **X** 50% Capacity factor **=** ~16 million MWh annually
New owned wind (2018-2022)

Attractive Investment Thesis

Pure-Play Regulated Utility that Consistently Delivers

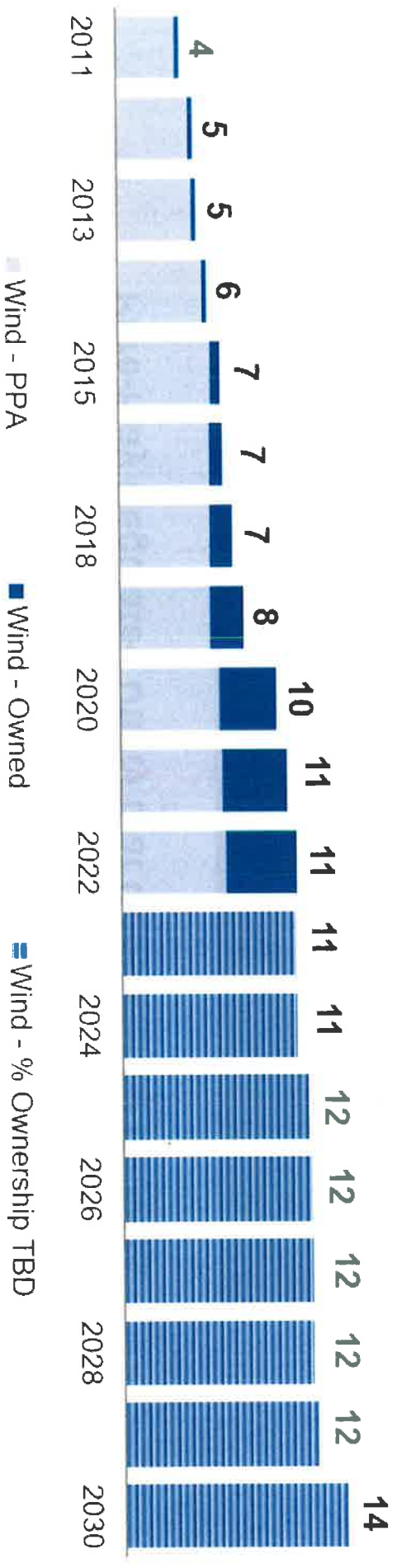


- ✓ Sustainable **long-term growth**
- ✓ Strong **ESG leadership**
- ✓ Proven **track record**

Steel for Fuel - Expanding Renewables Profile

Targeting 50% Ownership of New Resources

GW



Strategy

VISION

We will be the **preferred** and **trusted** provider of the energy our customers need

MISSION

We provide our customers the safe, clean, reliable energy services they want and value at a competitive price

PRIORITIES



Lead the Clean Energy Transition

- Electricity: 80% carbon reduction by 2030, 100% carbon-free by 2050
- Natural gas: 25% GHG reduction by 2030, net-zero by 2050



Enhance the Customer Experience

- Conservation, new products/services
- 1.5 million EVs enabled by 2030



Keep Bills Low

Average bill increases \leq rate of inflation

VALUES



Connected



Committed



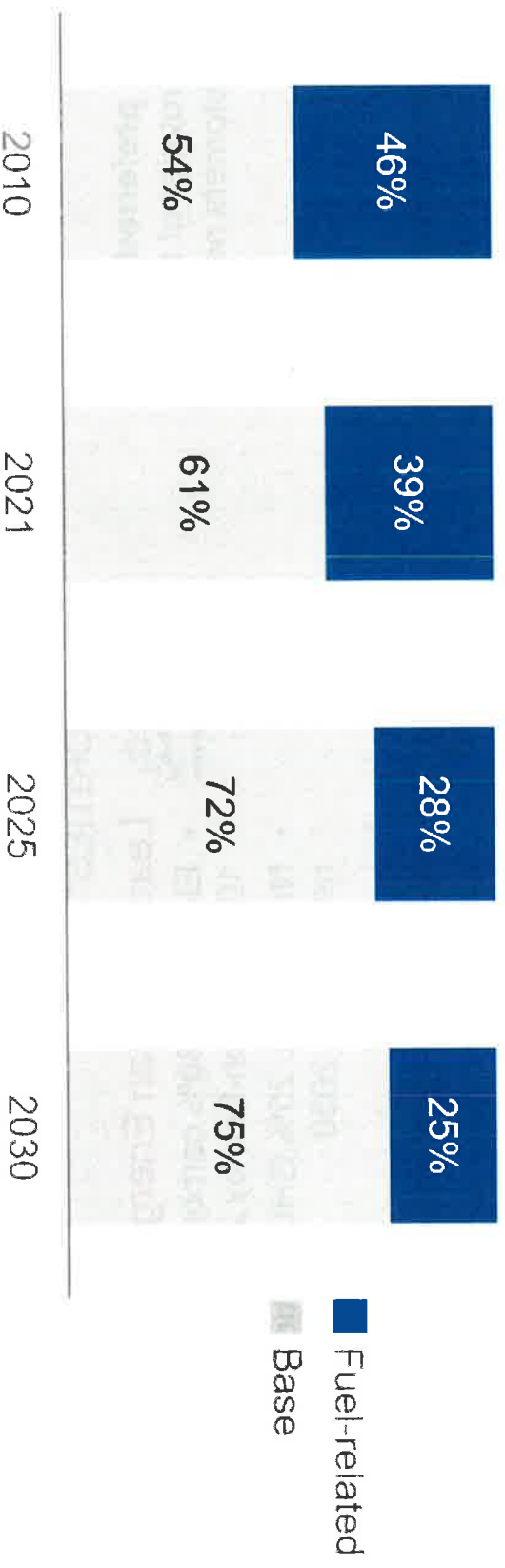
Safe



Trustworthy

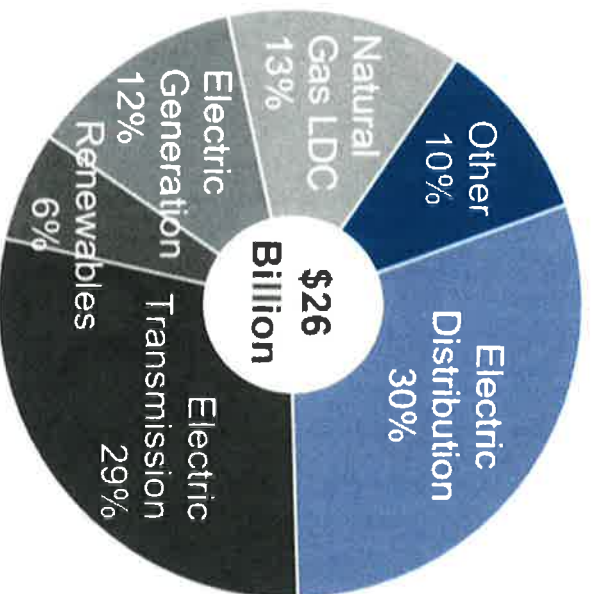
Committed to Affordability

Declining Fuel Component of Bill = Customer Savings

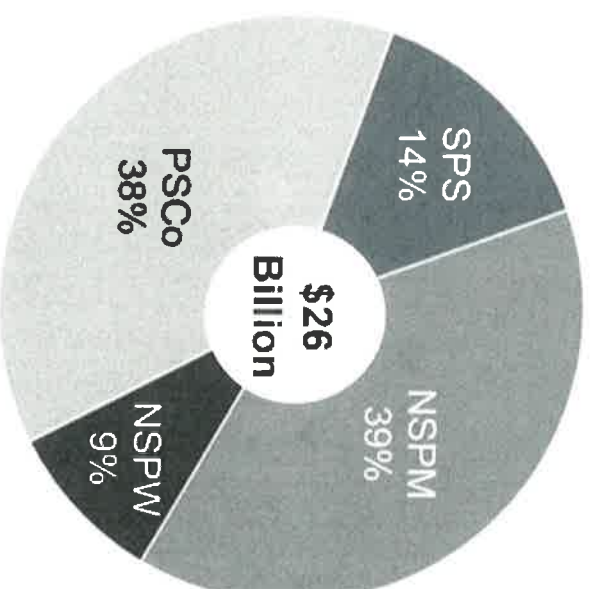


Robust Base Capital Forecast 2022 - 2026

Investment by Function



Investment by Company



Base capital forecast excludes potential incremental investment associated with resource plans

ESG LEADERSHIP

Potential Incremental Investment 2024 - 2026

\$1.5 - \$2.5 Billion in Incremental Opportunities



\$1.0 - \$1.5 Billion Renewables

~2,000 MW proposed additions across Colorado and Minnesota resource plans, assuming 50% ownership

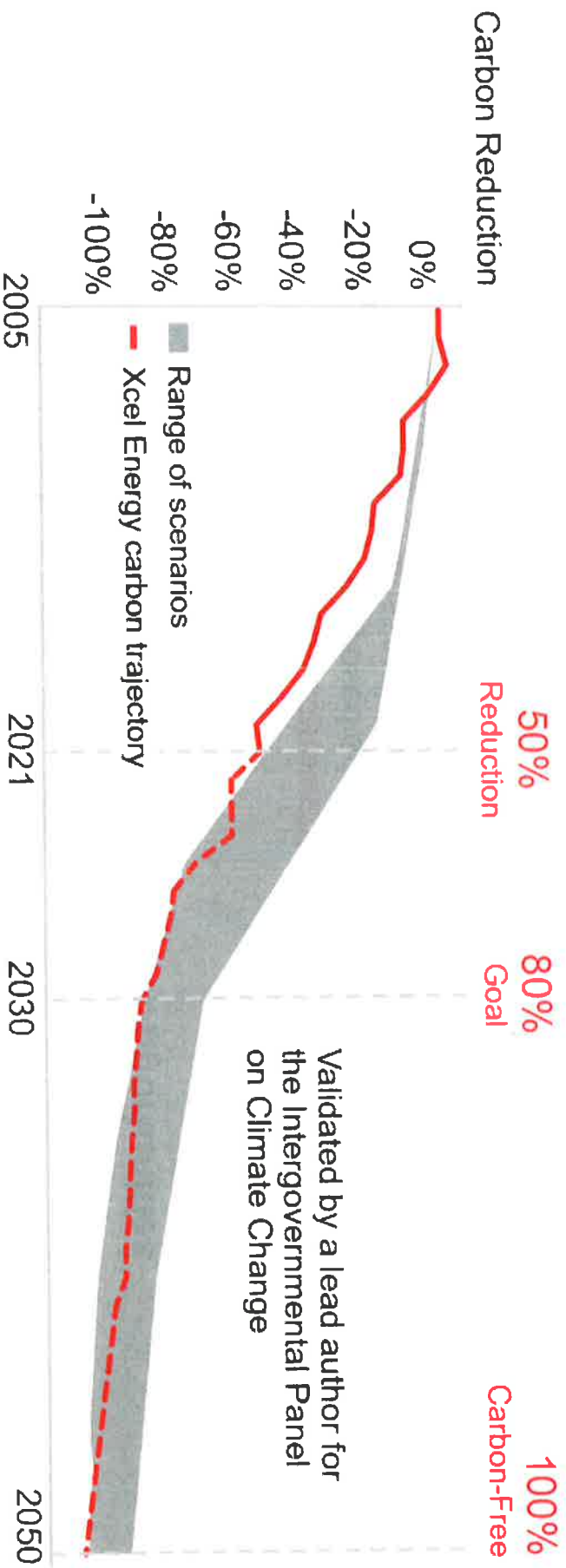


\$0.5 - \$1.0 Billion Transmission

Enables renewables associated with the Colorado resource plan, including network upgrades, voltage support and interconnection work

Carbon Goals Aligned With Paris Accord

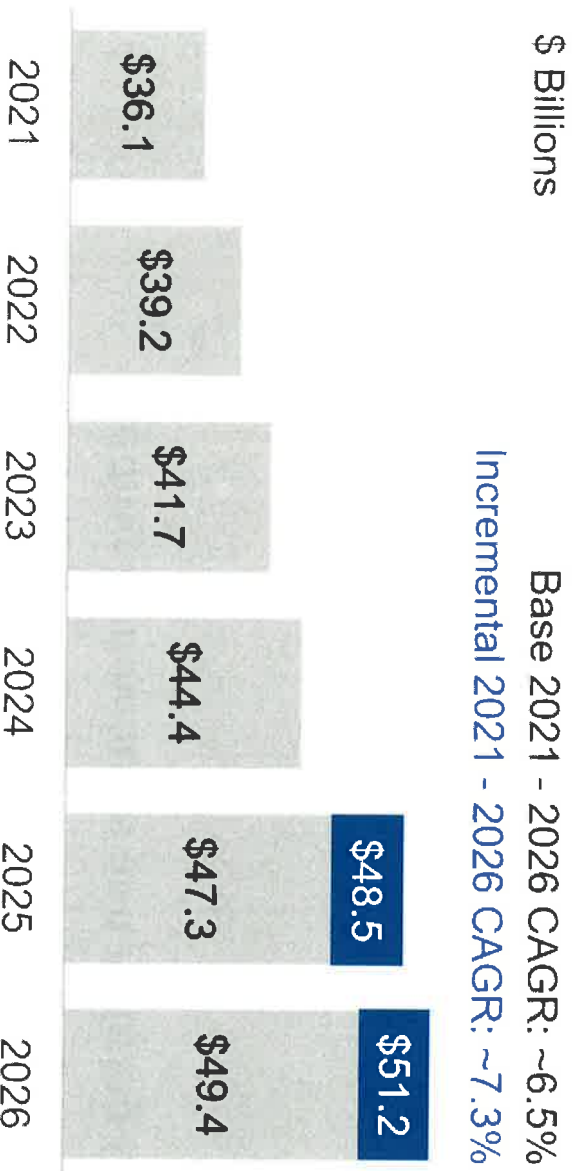
Goals Align with Science-Based Scenarios Likely to Achieve 1.5° C



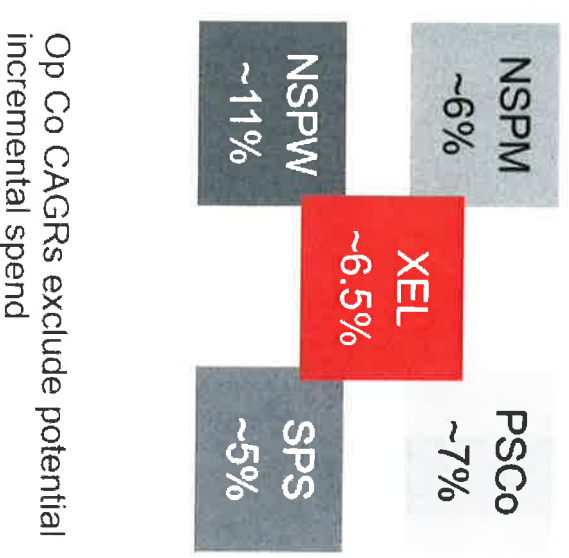
Goal includes owned and purchased power

Strong Rate Base Growth

Xcel Energy Consolidated

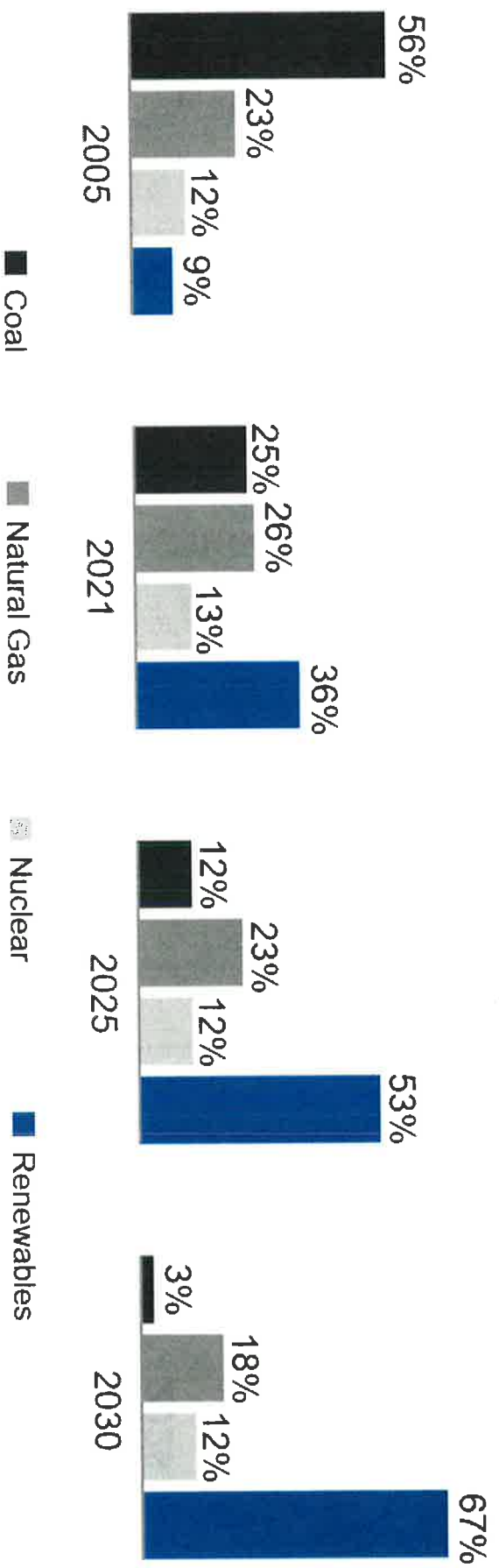


Op Co Base CAGRs 2021 - 2026



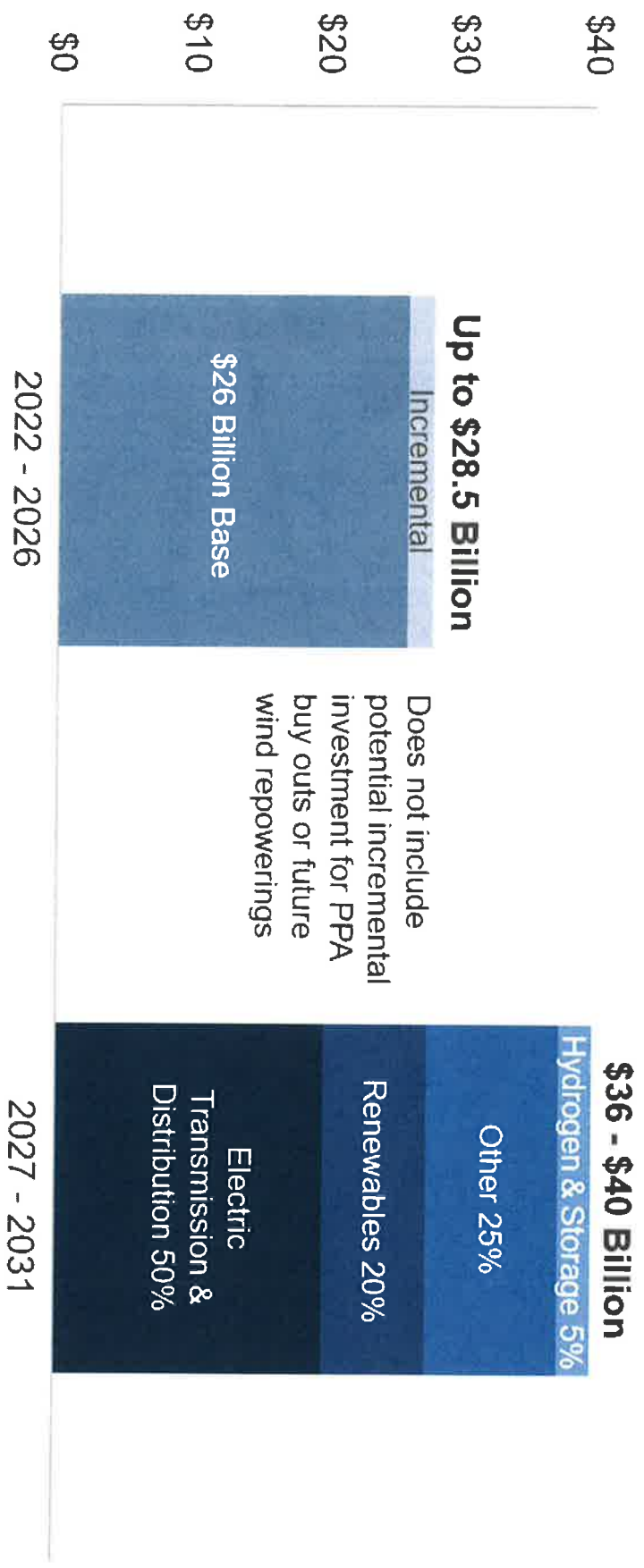
Significant Shift in Energy Mix

Adding Renewables and Retiring Coal Plants Early



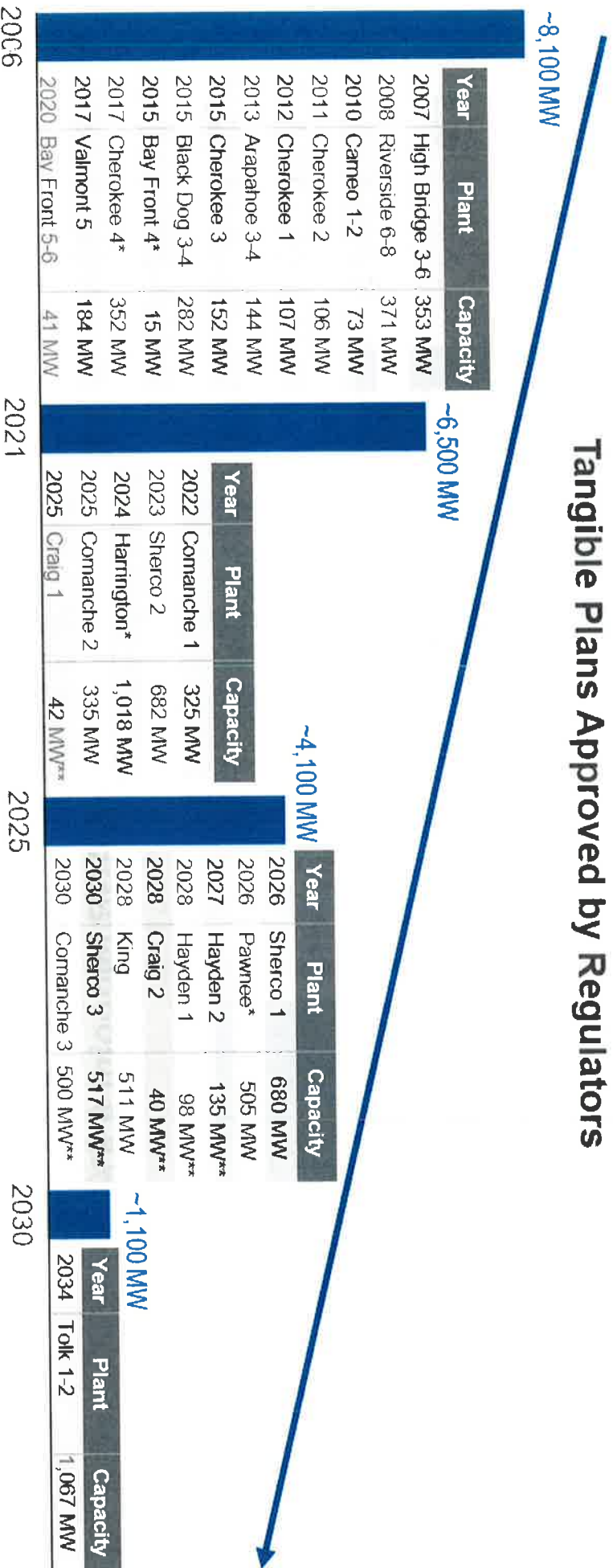
Robust Capital Forecast 2022 - 2031

2026 - 2031 Rate Base CAGR Midpoint 6.5%



Out of Coal by 2034

Tangible Plans Approved by Regulators



* Conversion from coal to natural gas; Harrington pending approval

** Based on Xcel Energy's ownership interest

Significant Organic Growth Opportunities



RESOURCE PLANS

~10 GW by 2034

Assumed 50% ownership



ELECTRIC VEHICLES

Charging infrastructure, programs and grid upgrades



TRANSMISSION BUILDOUT

Expansion to enable more renewables in Colorado, MISO and SPP



GRID RESILIENCY

Hardening, automation and capacity for distributed resources and future growth



HYDROGEN

Blending into power generation and natural gas LDC operations

Net Zero Natural Gas Service

25% Net GHG Emission Reduction by 2030, Net Zero by 2050



Goal compared to 2020 baseline; includes gas supply for electric system
Net zero assumes use of biologic offsets and carbon capture technologies

Transparent Resource Plans

80% Carbon Reduction by 2030, Full Coal Exit by 2034

	 PSCO	 NSPM/NSPW	 SPS
Carbon reduction	85%	85%	>70%
Full coal exit	2030	2030	2034
New renewables	~4,000 MW	~5,800 MW	~1,900 MW
Spend horizon	2025 - 2030	2024 - 2034	2025 and beyond

Long-Term Transmission Buildout

Major Expansion to Enable More Renewables

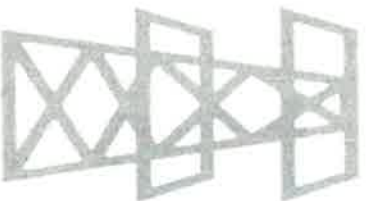
NSP

MISO Future 1 investment = ~\$30 billion

MISO Future 3 investment = ~ \$100 billion

NSP Tranche 1 cap ex of ~\$1.2 billion

NSP Future 1: Estimated \$4 - \$5 billion investment (over 10-15 years)



PSCo

~\$1.7 billion Pathway enables 5.5 GW renewables via 560 miles of 345 kV lines

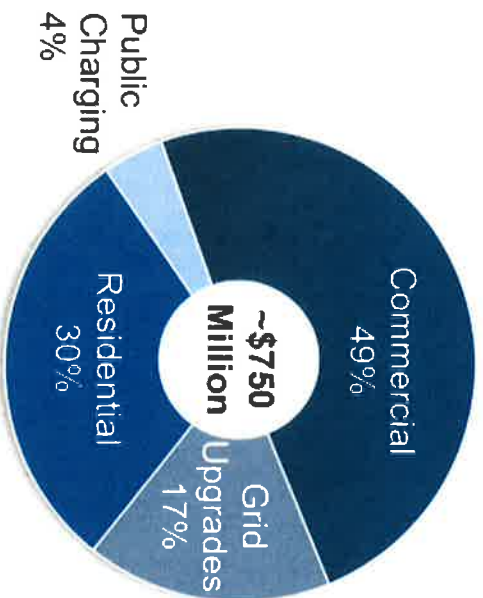
Additional \$0.5 - 1.0 billion in potential future projects

SPS

\$0.5 - \$1.0 billion in potential projects that help alleviate congestion and enable future load growth and renewables in SPP

Electric Vehicle Infrastructure

2022 - 2026



- RESIDENTIAL**
- Charger installs and services
 - Rebates for vehicles and charger installs (rate based)

Enabling 1.5 Million EVs by 2030



2027 - 2031



- COMMERCIAL**
- Charging equipment/installs for cities, schools and businesses
 - EV purchase rebates (rate based)
- PUBLIC**
- Stations in major corridors and underserved communities

Grid Resiliency



System Health & Hardening

Infrastructure upgrades and targeted undergrounding to protect against severe weather events and minimize outage impacts



Grid Automation & Efficiency

Monitoring and control systems, storage, microgrids and advanced technologies that help prevent and mitigate outages



Capacity Expansion

New infrastructure to accommodate distributed resources and electric vehicles



Always There.®

Page 1 of 4

September 26, 2022

Dear Licensed Mechanical Contractor:

Safety is CenterPoint Energy's top priority. CenterPoint Energy operates nearly 14,000 miles of pipelines in Minnesota and serves more than 860,000 customers in the state. As a licensed mechanical contractor in Minnesota who may be hired by customers to work on customer-owned natural gas piping or gas appliances, you are receiving this reminder about **the dividing line between CenterPoint Energy's equipment and the customer's equipment.**

As illustrated by the diagram enclosures:

- CenterPoint Energy owns the natural gas meter and the piping that comes into it.
- Customers own the piping coming out of the meter to the natural gas appliances and other natural gas-operated equipment in the customer's facility or residence.
- In some locations, CenterPoint Energy's natural gas meter(s) and piping to the meter(s) are located *inside* a customer's facility or residence. In locations with inside meters, CenterPoint Energy continues to own the natural gas meter(s) and equipment on the inlet side of the meter.

Regardless of where CenterPoint Energy's equipment is located, customers and mechanical contractors are not authorized to work on or operate any of CenterPoint Energy's equipment, including but not limited to pipelines, meters, valves, regulators, and associated pipe fittings. For your own and others' safety, do not attempt to work on or operate CenterPoint Energy's equipment. Do not tamper with the meter or attempt to service or maintain the meter itself. In the event of an emergency, call 911 immediately.

If you are replacing a gas appliance (stove, range, water heater, central heater, dryer, etc.) while the gas service remains active, the isolation valve near or behind the appliance (which is customer-owned) must be turned off prior to disconnecting the appliance. If there is no isolation valve between the appliance and the customer-owned gas piping, there may be an isolation valve at the outlet of the gas meter on customer piping. This valve can be turned off to completely shut off natural gas. If no isolation valve is available, please call [612-342-5123](tel:612-342-5123) or [800-342-4166](tel:800-342-4166) to request that natural gas service be turned off prior to the appliance being replaced.

If modifications are required to CenterPoint Energy's equipment, you must contact CenterPoint Energy in advance so that we can coordinate any necessary work involving the company's equipment. Please contact CenterPoint Energy at [612-342-5123](tel:612-342-5123) or [800-342-4166](tel:800-342-4166) to make arrangements.



Always There.®

Page 2 of 4

For more natural gas safety information, please visit www.centerpointenergy.com/safety.

Thank you for your cooperation and commitment to safety.

Sincerely,

A handwritten signature in black ink that reads "Dean".

Dean Headlee
Pipeline Safety and Compliance Manager - Regional Gas Operations

Enclosures: Meter Figure Examples

Figures 1 and 2: Examples of outdoor residential meter installation

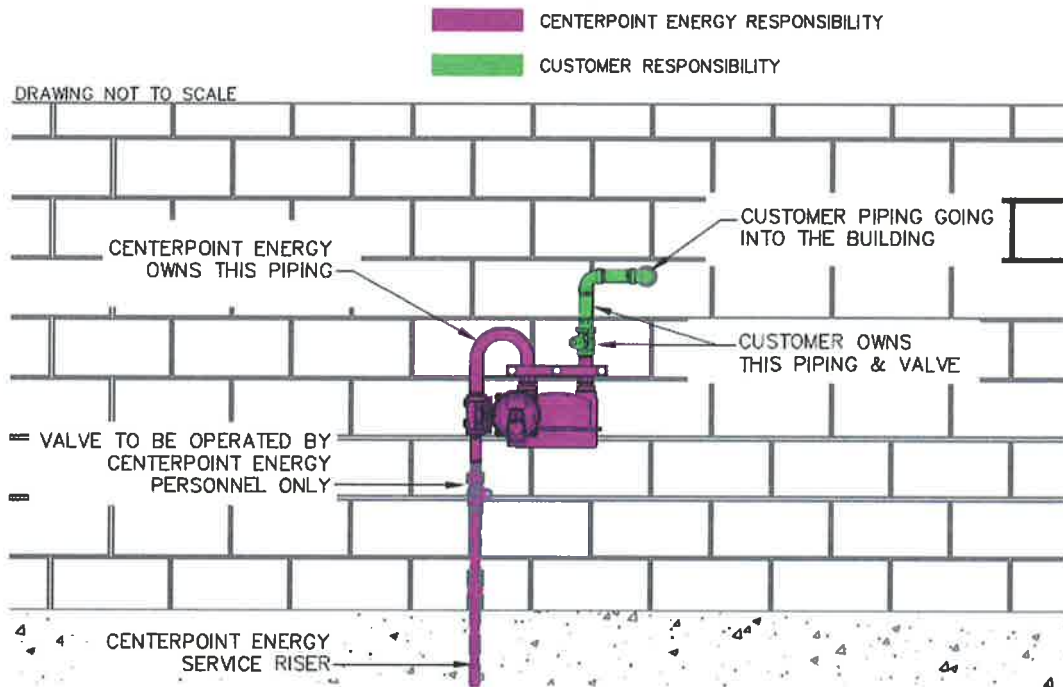
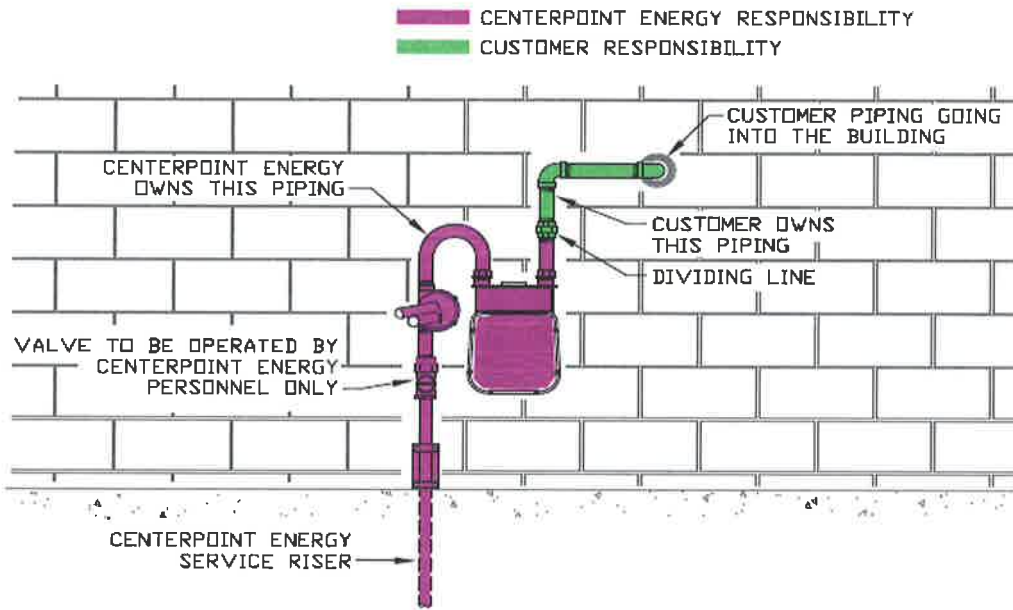
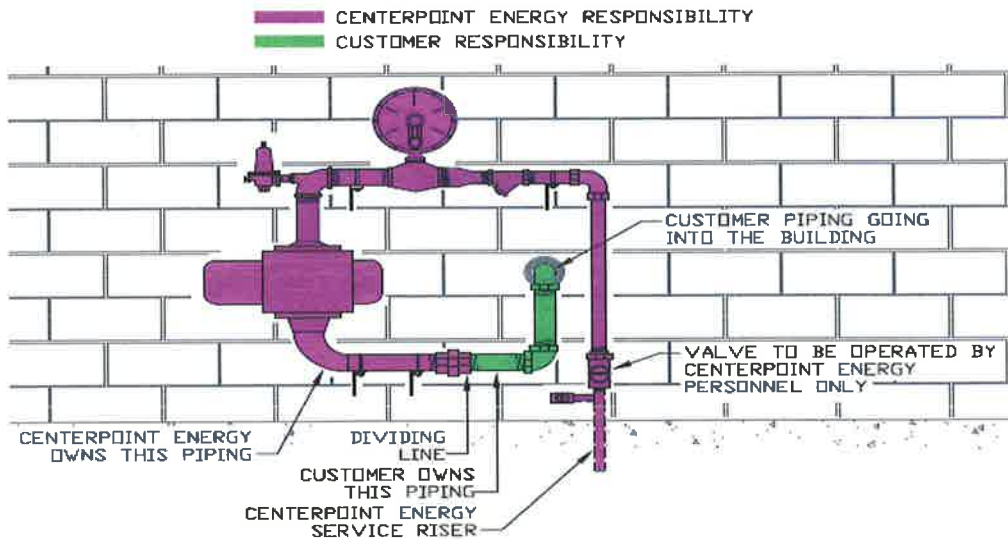


Figure 3: Example of outdoor commercial meter installation



The diagrams show three typical meter installations, but other types of meter installations exist and may look different. If you have questions about the dividing line between CenterPoint Energy's equipment and customer-owned equipment, please contact us at [612-342-5123](tel:612-342-5123) or [800-342-4166](tel:800-342-4166).

From: Arlington Public Library
Sent: Tuesday, November 1, 2022 2:08 PM
To: Amy Newsom
Subject: Amazon

I interviewed my employees this morning. Can they be put on the agenda for next Monday? \$13 an hour.

Also, could I have access to the Amazon account before you leave?

Thanks,
Andy

Ardis Husfeldt
Pat Erabitzke
Kathy Bierscheidt

ARLINGTON, MN
***Expenditure Summary**

FUND	Description	2022 YTD Budget	SEPTEMBER 2022 Amt	2022 YTD Amt	Enc Current	YTD Balance	% YTD Budget
101	General Fund	\$1,313,981.00	\$124,184.99	\$930,269.80	\$0.00	\$383,711.20	70.80%
102	Tax Abatement	\$7,825.00	\$0.00	\$0.00	\$0.00	\$7,825.00	0.00%
201	Fire Fund	\$148,133.00	\$7,494.85	\$56,751.31	\$0.00	\$91,381.69	38.31%
202	Ambulance Fund	\$511,822.00	\$38,247.81	\$399,942.09	\$0.00	\$111,879.91	78.14%
203	Community Center Fund	\$73,245.00	\$9,862.68	\$50,029.36	\$0.00	\$23,215.64	68.30%
204	EDA Loan Programs Fund	\$49,700.00	\$0.00	\$5,774.62	\$0.00	\$43,925.38	11.62%
205	Revolving Loan Fund	\$45,500.00	\$0.00	\$20,430.00	\$0.00	\$25,070.00	44.90%
206	Small Cities Developmt Program	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
207	Cemetery Fund	\$10,659.00	\$998.25	\$11,777.58	\$0.00	-\$1,118.58	110.49%
208	Cemetery Perpetual Care Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
210	Medical Center Fund	\$169,838.00	\$0.00	\$23,927.00	\$0.00	\$145,911.00	14.09%
215	Park Dedication Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
301	Tax Increment District #1-4	\$0.00	\$11,051.34	\$11,051.34	\$0.00	-\$11,051.34	0.00%
314	Sinking Fund - 2009 GO Improv.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
315	Sinking Fund - 2012 GO Improv.	\$11,726.00	\$0.00	\$11,725.84	\$0.00	\$0.16	100.00%
317	Sinking Fund - 2015 GO Improv.	\$100,858.00	\$0.00	\$100,857.50	\$0.00	\$0.50	100.00%
318	Sinking Fund - 2017 GO Improv.	\$85,031.00	\$0.00	\$85,526.23	\$0.00	-\$495.23	100.58%
320	2008 Equipment Certificates	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
321	Sinking Fund - 2019 GO Improv.	\$88,650.00	\$550.00	\$88,700.00	\$0.00	-\$50.00	100.06%
350	Ambulance Certificate	\$18,234.00	\$0.00	\$18,234.00	\$0.00	\$0.00	100.00%
351	FIRE TRUCK - 2019 Tanker	\$23,225.00	\$0.00	\$23,225.00	\$0.00	\$0.00	100.00%
352	2014 Fire Truck	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
360	Hospital Bond Fund	\$270,638.00	\$0.00	\$23,318.75	\$0.00	\$247,319.25	8.62%
401	Capital Equipment Fund	\$255,350.00	\$167.97	\$159,922.60	\$0.00	\$95,427.40	62.63%
410	Economic Development Authority	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
417	2015 Improvement Const.Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
418	2017 Imp. Construction Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
419	Circle Dr. Imp. Project	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
421	2019 Street Imp. Const. Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
425	2014 Electric Imp. Project	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
601	Water Fund	\$442,964.00	\$66,196.37	\$615,568.07	\$0.00	-\$172,604.07	138.97%
602	Sewer Fund	\$88,557.00	\$675.00	\$59,398.72	\$0.00	\$29,158.28	67.07%
603	AGI Sewer Fund	\$633,056.00	\$24,424.75	\$483,602.85	\$0.00	\$149,453.15	76.39%
604	Electric Fund	\$2,031,695.00	\$262,896.08	\$1,889,962.33	\$0.00	\$141,732.67	93.02%
605	Storm Water Drainage Fund	\$128,364.00	\$0.00	\$125,972.75	\$0.00	\$2,391.25	98.14%
606	Comm Center Bond Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
901	General Fixed Assets Acct Grp	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
902	General Long-Term Debt Acct Gr	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
903	GASB 34 - Revenue Recognition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
		\$6,509,051.00	\$546,750.09	\$5,195,967.74	\$0.00	\$1,313,083.26	79.83%

FILTER: None

ARLINGTON, MN
***Revenue Summary**

11/02/22 8:44 AM

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FUND	Description	2022 YTD Budget	SEPTEMBER 2022 Amt	2022 YTD Amt	YTD Balance	% of YTD Budget
101	General Fund	\$1,313,981.00	\$57,447.32	\$753,950.33	\$560,030.67	57.38%
102	Tax Abatement	\$7,830.00	\$0.41	\$2.40	\$7,827.60	0.03%
200	COVID-19 Fund	\$0.00	\$169.55	\$117,815.47	-\$117,815.47	0.00%
201	Fire Fund	\$135,355.00	\$790.91	\$105,268.41	\$30,086.59	77.77%
202	Ambulance Fund	\$501,412.00	\$25,704.57	\$347,713.65	\$153,698.35	69.35%
203	Community Center Fund	\$74,025.00	\$3,470.73	\$55,630.06	\$18,394.94	75.15%
204	EDA Loan Programs Fund	\$3,800.00	\$162.64	\$7,647.29	-\$3,847.29	201.24%
205	Revolving Loan Fund	\$9,000.00	\$764.37	\$6,492.90	\$2,507.10	72.14%
206	Small Cities Developmt Program	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
207	Cemetery Fund	\$8,400.00	\$826.44	\$11,075.57	-\$2,675.57	131.85%
208	Cemetery Perpetual Care Fund	\$110.00	\$0.00	\$223.75	-\$113.75	203.41%
210	Medical Center Fund	\$191,039.00	\$24,094.25	\$153,265.09	\$37,773.91	80.23%
215	Park Dedication Fund	\$300.00	\$45.81	\$275.45	\$24.55	91.82%
314	Sinking Fund - 2009 GO Improv.	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
315	Sinking Fund - 2012 GO Improv.	\$11,985.00	\$20.64	\$6,334.49	\$5,650.51	52.85%
317	Sinking Fund - 2015 GO Improv.	\$93,162.00	\$234.63	\$49,744.29	\$43,417.71	53.40%
318	Sinking Fund - 2017 GO Improv.	\$80,131.00	\$5,911.72	\$75,595.53	\$4,535.47	94.34%
320	2008 Equipment Certificates	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
321	Sinking Fund - 2019 GO Improv.	\$87,308.00	\$330.70	\$46,902.49	\$40,405.51	53.72%
350	Ambulance Certificate	\$40.00	\$0.43	\$17.33	\$22.67	43.33%
351	FIRE TRUCK - 2019 Tanker	\$23,225.00	\$25.07	\$12,850.01	\$10,374.99	55.33%
352	2014 Fire Truck	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
360	Hospital Bond Fund	\$270,638.00	\$0.00	\$23,318.75	\$247,319.25	8.62%
401	Capital Equipment Fund	\$370,563.00	\$14,417.36	\$206,714.82	\$163,848.18	55.78%
410	Economic Development Authority	\$100.00	\$5.24	\$31.53	\$68.47	31.53%
417	2015 Improvement Const.Fund	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
418	2017 Imp. Construction Fund	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
419	Circle Dr. Imp. Project	\$0.00	\$0.00	\$12,967.72	-\$12,967.72	0.00%
421	2019 Street Imp. Const. Fund	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
425	2014 Electric Imp. Project	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
601	Water Fund	\$450,005.00	\$40,230.68	\$1,441,589.68	-\$991,584.68	320.35%
602	Sewer Fund	\$91,800.00	\$5,316.13	\$62,454.06	\$29,345.94	68.03%
603	AGI Sewer Fund	\$605,800.00	\$40,312.36	\$460,123.34	\$145,676.66	75.95%
604	Electric Fund	\$2,035,650.00	\$250,482.78	\$1,794,783.78	\$240,866.22	88.17%
605	Storm Water Drainage Fund	\$121,050.00	\$11,702.10	\$106,573.79	\$14,476.21	88.04%
606	Comm Center Bond Fund	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
901	General Fixed Assets Acct Grp	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
902	General Long-Term Debt Acct Gr	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
903	GASB 34 - Revenue Recognition	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
		\$6,486,709.00	\$482,466.84	\$5,859,361.98	\$627,347.02	90.33%

FILTER: None

ARLINGTON STATE BANK

<u>FDIC#</u>	<u>Certificates of Deposit</u>	<u>RATE</u>	<u>ISS DATE</u>	<u>MAT.DATE</u>	<u>AMOUNT</u>	
1391	820497	2.00	02/15/17	02/15/22	0.00	Reinvested
1391	820767	1.00	03/23/20	03/23/23	195,000.00	Quarterly
1391	820795	1.10	07/27/20	07/27/24	80,000.00	Quarterly
1391	820944	1.00	06/30/22	06/30/25	100,000.00	Quarterly

ARLINGTON STATE BANK TOTAL:

\$375,000.00**RBC WEALTH MGMT (Transferred from MORGAN STANLEY)**

<u>FDIC#</u>	<u>Certificates of Deposit</u>	<u>RATE</u>	<u>ISS DATE</u>	<u>MAT DATE</u>	<u>AMOUNT</u>	<u>INTEREST</u>
	Sallie Maie Bank, SaltLakeCity	2.60	04/10/19	04/11/22	0.00	Matured
	Goldman Sachs, NY	2.60	04/17/19	04/18/22	0.00	Matured
	American Exp- Salt Lake City, UT	2.40	05/24/17	05/24/22	0.00	Matured
	MS Bank - Salt Lake City, UT	2.90	04/05/18	04/05/23	100,000.00	Semi-Annual
	Morgan Stanley	0.25	01/05/21	01/08/24	145,000.00	Quarterly
	Morgan Stanley	1.65	03/05/20	03/05/24	220,000.00	Semi-Annual
	Goldman Sachs Bank, NY	3.35	06/28/22	07/08/24	200,000.00	Monthly
	Sallie Mae Bank- Murray, UT	3.30	06/28/22	07/08/24	200,000.00	Semi-Annual
	FlagStar Bank- Troy, MI	0.50	08/06/20	07/31/24	245,000.00	Semi-Annual
	State Bank India, NY	1.05	06/10/20	06/10/25	200,000.00	Semi-Annual
	Jonesboro Bank	0.50	12/18/20	12/18/26	175,000.00	Monthly
	First National Bank	1.25	12/30/21	12/30/26	165,000.00	Monthly
	Texas Exchange Bank-Crowley	0.80	11/25/20	05/25/27	145,000.00	Monthly
	Celtic Bank - Salt Lake City, UT	1.50	12/20/21	12/20/28	165,000.00	Monthly
	Cash/MoneyMarket				20,388.49	

RBC WEALTH MGMT TOTAL:

\$1,980,388.49

CD Amounts:

1,960,000.00

FINANCIAL NORTHEASTERN COMPANIES

RATE ISS.DATE MAT.DATE AMOUNT

FDIC# Certificates of Deposit

CITIBANK - Sioux Falls, SD	3.10	05/04/18	05/04/23	100,000.00	Semi-Annual
Sallie Mae - Salt Lake City , UT	3.30	06/13/18	06/13/23	98,000.00	Semi-Annual
Comenity Cap. Bank- Salt Lake	3.25	06/15/18	06/15/23	151,000.00	Monthly
State Bank India - New York	1.80	01/31/22	02/01/27	100,000.00	Semi-Annual
Cash & Cash Equivalentents				134.80	

FINANCIAL NORTHEASTERN COMPANIES TOTAL:

\$449,134.80

4M FUND

4M Plus	2.248	General Money Market	754,031.54
4M	2.229	2019 Imp. Bond Account	<u>1,005,174.10</u>
		4M Fund Total:	\$1,759,205.64

CITY OF ARLINGTON ORDINANCE NO. 346

AN ORDINANCE AMENDING CHAPTER 6: NUISANCES

AN ORDINANCE AMENDING CHAPTER 6, THE ARLINGTON NUISANCES CODE TO ALLOW THE ADJUSTMENT OF CHAPTER 6 FOR THE ADDITION OF DEFINITIONS, UNDER 6.03, THE ADJUSTMENT TO 14 BUSINESS DAYS, UNDER 6.07, 6.09, AND 6.10, THE ADJUSTMENT OF THE ABATEMENT PROCEDURE, UNDER 6.10

CHAPTER 6: NUISANCES

- 6.01 Adoption of State Laws
- 6.02 Violation Penalties
- 6.03 Definitions
- 6.04 Noise Nuisances
- 6.05 Outdoor Gatherings
- 6.06 Fires
- 6.07 Refuse Control and Removal
- 6.08 Outdoor Parking and Storage
- 6.09 Lawn and Weed Control
- 6.10 Abatement Procedures
- 6.11 Repeat Nuisance Calls Service Fee

6.01 ADOPTION OF STATE LAWS

Minnesota Statute 609.74 PUBLIC NUISANCE is hereby adopted, to include any amendments or replacements thereof.

6.02 VIOLATION PENALTIES

Any violation of any section of this chapter shall be punishable as a misdemeanor under Minnesota Statute 609.02, Subdivision 3, or any laws amending or replacing such statute. However, in the discretion of the City, any such violation may be certified as a petty misdemeanor.

6.03 DEFINITIONS

A. Abatement: lessen, reduce, or remove.

B. Mail: Service by mail shall mean depositing the item with the U.S. Postal Service addressed to the intended recipient at their last known address with First Class postage prepaid thereon.

C. Outdoor Gatherings: Any public or private event, attraction, festival or show which is in one area.

D. Owner: Those shown as owner or owners on the records of the Sibley County Recorder.

E. Personal Service: Service by personally handing a copy to the intended recipient or by leaving a copy at the intended recipient's residence or place of business with a person of suitable age and discretion.

F. Public Nuisance: Maintaining or permitting a condition that unreasonable annoys, injuries, or endangers the safety, health, morals, or repose of any considerable number of members of public. The following acts are declared a public nuisance:

(1) Engaging in any business or activity which is dangerous, hurtful, unwholesome, offensive, or unhealthy to the neighborhood, or which constitutes an annoyance to the persons in the neighborhood or is detrimental to the property in the neighborhood.

(2) Permitting, suffering, or maintaining, or failing to remove any offensive, nauseous, hurtful, dangerous, unhealthy condition resulting from a failure to properly dispose of garbage, sewage, waste, debris or any other unwholesome or offensive substance, liquid, or thing, upon one's premises, or dropping, discharging, passing, depositing, or otherwise delivering the same upon the premises of another or public property.

G. Responsible Party: Any one or more of the following: Agent, assignee or collector of rents for owner; holder of a contract for deed; a mortgagee or buyer in possession; receiver,

executor or trustee for owner; lessee; or other person or entity exercising apparent control over a property.

6.04 NOISE NUISANCES

- A. Any person who keeps or harbors a pet or other animal on his property, in the case where the pet or animal is of such a nature or disposition or is kept in such confinement or condition that the animal disrupts the peace of the neighboring property owners by emitting barking or other noises at late night hours, shall be considered as maintaining a public nuisance. Late night hours for purpose of this section shall be defined as any time after 11:00 p.m. It shall also be a violation of this ordinance if any person keeps or harbors a pet or other animal who emits barking or other noises at any time of the day or night in a continuous or persistent manner. The phrase “continuous or persistent manner” for purpose of this section shall be defined as any barking or loud noises created by the pet continuously for a period of 10 minutes or more, or on an average of more than once each hour.
- B. Any person who causes or allows loud music or other disturbing noises to originate from his property in an unreasonable manner or at unreasonable hours which would tend to alarm or disturb the peace and tranquility of his neighbors shall be guilty of creating or maintaining a public nuisance. Noise or music sources located on the yard or other portions of the property outside the structures of a person’s property after the hour of 12:00 a.m. midnight shall be considered prima facie a public nuisance. This provision shall also apply to any noise or music sources located in a motor vehicle whether on private or public property. It shall be considered prima facie a public nuisance if music, muffler emission or engine noises or any other noise emitted from a motor vehicle can be clearly heard from a distance of more than 50 feet from the vehicle. The driver of any offending motor vehicle, or if no driver is present, the owner of said vehicle, shall be considered the party violating this ordinance.
- C. This ordinance shall not apply to activities, events or celebrations specifically authorized by the City Council, including but not limited to community celebrations and parades, the Sibley County Fair, auto racing held at the Sibley County Fairgrounds, or athletic events held in city parks or on school grounds. Instead, the City Council shall establish specific rules for any such events, as the City Council deems appropriate, balancing the interest of public health and safety with the reasonable needs of such events. The specific rules to be set by the City for such events shall include but not be limited to allowed levels of noise, crowd control, parking and traffic flow rules, and event activity closing time and crowd evacuation time.

6.05 OUTDOOR GATHERINGS

- A. It is unlawful for any persons to congregate on any private property to participate in any party or gathering of people unless the owner of said private property is present or unless said owner has given written permission for such gathering, and such written permission is in the possession of one or more persons participating at the gathering. In the absence of the property owner, failure to display written permission as described herein upon request of a police officer shall be considered prima facie evidence of a violation of this Ordinance.
- B. It shall be unlawful for persons to participate in any gathering on any city street, sidewalk or parking lot, which impedes the flow of traffic, or which disturbs the peace, quiet, or repose of other persons. City parking lots are to be used for the parking of motor vehicles only, and not for social gatherings, except by specific written permission of the City Council in conjunction with community social activities and celebrations. A gathering of more than 5 persons for a consecutive time of more than 15 minutes in any City parking lot shall be considered prima facie evidence of a violation of this Ordinance.

6.06 FIRES

This Section does not apply to the City of Arlington brush and yard waste dump site, where occasional controlled burns of accumulated brush may take place by City Staff.

- A. Indoor Fires. Indoor fires mean any fires created within a fully enclosed structure. Indoor fires shall be allowed only in properly built and safe, UL approved furnaces and fireplaces, and shall be created only for the purpose of heating and food preparation. Only natural gas, propane, fuel oil, coal, or wood products may be used to fuel said fires. The furnace or fireplace system shall be provided with proper vents or chimney and shall be properly maintained so as to function in a safe condition, and to prevent ash, smoke, and noxious odors from drifting onto neighboring property.
- B. Outdoor Fires. Outdoor fires are any fires created outside of a fully enclosed structure. No outdoor fires shall be allowed on open ground. Outdoor fires shall be created only in an outdoor fireplace, barbecue equipment or concrete-lined fire pit, sufficient to provide physical limitation to the spread of the fire. Outdoor fires are strictly prohibited except for recreational purposes. Recreational purposes shall include only the cooking of food or the providing of heat and light for outdoor social gatherings. Only propane, charcoal bricks, or wood products may be used to fuel outdoor fires. The outdoor fire shall be maintained and controlled in such a manner as to avoid smoke, ash, and obnoxious odors from drifting onto neighboring property. Outdoor fires shall be supervised at all times by at least one adult person, who will be responsible to properly maintain the fire, safeguard it from spreading, and safeguard it from children and animals. No objects other than the fuel materials approved in this ordinance shall be placed in such outdoor fires. No highly

flammable liquids such as gasoline or kerosene shall be used on such fires or stored near such files. Outdoor fires shall be created or maintained at a distance of at least 15 feet from all structures and property lines.

- C. Under no circumstances shall any garbage, lawn waste, or other objects be placed in any indoor or outdoor fire in the City of Arlington, except for the approved fuels noted in this ordinance.

6.07 REFUSE CONTROL AND REMOVAL

- A. Refuse Definition. Refuse includes, but is not limited to, household waste, discarded paper and cardboard, garbage, material resulting from the handling, processing, and consumption of food, vegetable or animal matter, offal, animal excrement, plant waste such as tree trimmings or grass cuttings, ashes, incinerator residue, street sweepings, construction debris, detached vehicle parts, furniture other than furniture designed as lawn furniture, appliances, inoperable equipment, and any other items or materials which are unsightly, attractive to insects or vermin, produce a noxious odor or are otherwise considered offensive by a reasonable person.
- B. Refuse Control and Removal: All refuse shall be kept or stored inside an enclosed building or appropriate garbage disposal containers and shall be removed from the premises to a proper garbage disposal facility or recycling collection center on a regular basis, which is defined as no less often than every 14 business days.
- C. Nuisances: Owners and/or responsible parties shall be considered as maintaining a nuisance if they are in violation of any of the rules of this ordinance, to include the following:
 - 1) It shall be considered a nuisance to collect, store or allow refuse contrary to this ordinance.
 - 2) During construction or repair of property within the city limits, building materials shall be stacked or stored in a neat and orderly fashion, and in a manner so as to avoid presenting any danger to the general public. Refuse building materials shall be neatly piled or stored in garbage disposal containers. All building materials and refuse shall be cleared from the construction project no later than 14 business days after completion of the construction or repair.
 - 3) Hazardous Waste, as defined by Minnesota law, shall at all times be properly handled, stored and promptly removed by a properly trained and equipped person or entity, as soon as possible after said hazardous waste is detected by any person or entity. No hazardous waste is to be created or transported into city limits except in conformity with all federal, state and local laws, regulations and permits.

6.08 OUTDOOR PARKING AND STORAGE

- A. Purpose. The purpose of this Subdivision is to allow exterior storage of certain items in certain zoning districts in a manner that is not a danger to the public's health, safety, or welfare and that does not negatively impact adjacent property values or constitute a public nuisance.
- B. Exemption. Outdoor Storage in U-R Urban Reserve District is exempt from this Section.
- C. General Provisions. The following provisions apply to all zoning districts:
- 1) No motor vehicles designed to operate on public highways which are unlicensed or in a condition prohibiting normal operation due to mechanical failure, defect, lack of required parts such as tires, or apparent damage from collision shall be stored on private property unless such vehicles are kept in a fully enclosed structure or fully enclosed manufactured licensed trailer, so that no part of the vehicle can be viewed by the public. Licensed Off-Road Vehicles, All-Terrain Vehicles and Off-Highway Motorcycles shall not be parked on a street or on private property for more than 48 concurrent hours within a 7-day week time period, unless such vehicles are kept in a fully enclosed manufactured licensed trailer, so that the public can view no part of the vehicle. Car parts, accessories, tools, and other items used to work on, repair, or otherwise used for said vehicles shall also be subject to the above conditions. Snowmobiles shall not be parked in front yard of any residential property for more than 48 concurrent hours within a 7-day week time period. No vehicles may be parked or stored on private property which are advertised for sale or rent, except not exceeding four total items, provided they are stored in a manner as approved under this Code.
 - h) The off-street parking of one (1) boat in a manner approved under City Code. Boats stored outdoors during non-boating season shall be effectively screened from adjacent property lines as viewed from a public street or alley. "Effectively Screened" shall mean eighty percent (80%) of what is stored is not visible from an adjacent property line or as viewed from a public street or alley.
 - i) The off-street parking of one (1) licensed and operable camper (camping trailer, truck camper, fifth wheel) or recreational vehicle (motor home, travel trailer) in a manner approved under City Code. A camper parked outdoors during the winter months shall be effectively screened from adjacent property lines as viewed from a public street or alley. "Effectively Screened" shall mean eighty percent (80%) of what is stored is not visible from an adjacent property line or as viewed from a public street or alley.

- j) The parking of one (1) licensed and operable commercial vehicle with a gross weight rating of less than 10,000 pounds in a manner approved under City Code. An additional commercial vehicle may be stored on a residential property provided an interim use permit is issued.
- k) The parking of one (1) licensed and operable trailer in a manner approved under City Code. An additional trailer may be stored on a residential property provided an interim use permit is issued. Horse and stock trailers are prohibited from being stored outdoors in a residential zoning district.

2) Outdoor storage area standards. The following standards apply to all outdoor storage areas in residential districts.

- a) Outdoor parking/storage areas in front yards and street-side corner yards shall be completely surfaced with an all-weather dustless material such as asphalt, concrete, pavers, bricks, or other equivalent material. Compacted gravel and/or rock is not a suitable surface. Existing outdoor parking/storage areas in front yards and street-side corner yards shall be brought up to all-weather, dustless surfacing standards upon receipt of a zoning application to improve, enlarge, and/or expand said parking or storage areas.
- b) The aggregate area of a front yard or street-side corner yard used for any combination of driveway, sidewalk, parking, and/or storage shall not exceed the following:
 - (1) Parcels with a total lot area of 5,999 square feet or less fifty (50) percent of the front yard.
 - b. Temporary storage (i.e. 90 days or less) of materials and equipment currently being used for landscaping or construction on the premises.
 - c. Merchandise on temporary display (i.e. 90 days or less) for sale.
 - d. Outdoor dining.
 - e. Outdoor sidewalk sales/signs.

F. Industrial Zoning Districts. The following standards apply to outdoor storage in all industrial zoning districts.

- 1) Outdoor storage/display. Outdoor storage/display shall be governed by the respective zoning district in which such use is located.
- 2) Outdoor storage requires the issuance of an interim use permit.
- 3) All outdoor storage shall be located in a rear or side yard. Outdoor storage is not allowed in a front yard.

- 4) Outdoor storage shall be screened with suitable materials so as to maintain fifty (50) percent or more opacity when viewed from a lot line. This performance standard applies to HVAC equipment and garbage dumpsters which is associated with new construction.
- 5) The following are exempt from this Section F:
 - a) Merchandise being displayed for sale in accordance with zoning district requirements.
 - b) Temporary storage (i.e. 90 days or less) of materials and equipment currently being used for landscaping or construction on the premises.

6.09 LAWN AND WEED CONTROL

A. Definitions.

- 1) "Control" means to destroy the aboveground growth of noxious weeds by a lawful method that prevents the maturation and spread of noxious weed propagating parts from one area to another. (Minnesota Statutes Chapter 18.77, Subdivision 3)
- 2) "Eradicate" means to destroy the aboveground growth and the roots of noxious weeds by a lawful method that prevents the maturation and spread of noxious weed propagating parts from one area to another. (Minnesota Statutes Chapter 18.77, Subdivision 4)
- 3) "Excessive Growth" means the growth of weeds or nonagricultural grass measured 12 inches or more in height.
- 4) "Nonagricultural Grass" means grasses that are not used or intended to be an agricultural commodity.
- 5) "Noxious Weed" means an annual, biennial, or perennial plant that the commissioner designates to be injurious to public health, the environment, public roads, crops, livestock, or other property. (Minnesota Statutes Chapter 18.77, Subdivision 8)
- 6) "Weed" means any unwanted or unsightly plant that hinders the growth of cultivated plants.

- B. Lawns and landscaped areas are to be cut or trimmed so that grass areas do not exceed 6 inches in height. Noxious weeds are to be controlled by physical removal or chemical treatment. Volunteer trees or bushes are to be removed or properly trimmed. Planted trees and bushes are to be properly trimmed so as to create a neat appearance, and to avoid overlapping boundary lines. Leaves, cut branches and logs are to be stored and handled in the same manner as other refuse, except that cut timber used for fireplaces may be kept and stored for use in an enclosed container or structure, or fenced off from public view.

- C. Public Nuisance. Any Noxious Weed or excessive growth of weeds and nonagricultural grasses measuring 12 inches or more in height is hereby declared to be a public nuisance affecting public health, safety, and welfare in the City of Arlington.
- D. Enforcement. When any condition exists on any parcel of land, both public and private within the City of Arlington, as described in this Section 6.09, City staff will serve a notice to the owner, and/or responsible party of said parcel, ordering them to cut and remove said weeds or grasses on the parcel within ~~ten (10) days~~ fourteen (14) business days upon service of the notice. Noxious weeds must be controlled or eradicated within ~~ten (10) days~~ fourteen (14) business days upon service of notice.

6.10 ABATEMENT PROCEDURES

- A. Abatement Procedures: In the event that a nuisance is found to exist within city limits in violation of this ordinance, the following abatement procedures will be used:
 - 1) Notice: City staff shall serve a written notice on the owner and/or responsible party of the property in violation, using a notice form approved by the City Council, stating the specific manner in which the ordinance has been violated, and explaining that the nuisance must be abated within (14) business days ~~10 days~~ after the receipt of said notice. The notice may be served by personal service on the owner and/or responsible party, or by mail. If the notice is served by mail, the (14) business days ~~10-day~~ notice term shall begin to run from the date the notice was mailed.
 - 2) If the property owner and/or responsible party does not abate the nuisance within the 14 business day notice term, the City shall do the following: ~~10-day notice term, the city may do any or all of the following:~~
 - a) The City may issue an administrative citation and the property owner and/or responsible party will have 14 business days to pay the fee and abate the nuisance. In the alternative, if the property owner and/or responsible party believes there is no nuisance on their property, they can file a written appeal to the City Zoning Administrator as Hearing Officer, within the 14 business day abatement term. If appealed, the City Zoning Administrator shall issue a written decision within 5 business days to either dismiss, modify, or uphold the administrative citation.
 - b) If the property owner and/or responsible party does not satisfy an administrative citation and abatement, the Police Department may issue a criminal nuisance citation, which can result in a court hearing being scheduled. The court has the power to issue a fine and an abatement order.

If the court order is not complied with in the time period ordered by the court, the court has the power to impose a jail term.

- c) If this matter goes to court, the City may request the court to allow the City to abate the nuisance by the use of city staff or hired contractors, and charge the cost of such abatement, plus an additional 25 percent added to such cost for the city administration costs, to the appropriate owner and/or responsible party. If the owner and/or responsible party fails to pay the City cost of abatement, the City may assess such charges against the property benefitted as a special assessment, under Minnesota law, for certification to the County Auditor for collection together with current taxes payable in the year following the violation
- d) ~~The City may abate the nuisance by the use of city staff or hired contractors, and charge the cost of such abatement, plus an additional 25 percent added to such cost for the city administration costs, to the appropriate owner and/or responsible party.~~
- e) ~~The City may cite the owner and/or responsible party with a violation of city ordinance, which shall be considered a criminal misdemeanor.~~
- f) ~~The City may request that the Court issue its Order compelling the appropriate owner and/or responsible party to abate the nuisance within a time designated by the Court, subject to a contempt of court citation for noncompliance.~~
- g) ~~If the owner and/or responsible party fails to pay the city cost of abatement, the City may assess such charges against the property benefitted as a special assessment, under Minnesota law, for certification to the County Auditor in collection together with current taxes payable in the year following the violation.~~

B. Emergency Abatement Procedure. When a nuisance is found to exist which constitutes an immediate danger or hazard if not immediately abated, and there does not exist sufficient time to follow the standard abatement procedures as set out in this ordinance, the City may abate the nuisance as follows:

- 1) The City shall order emergency abatement by an Order signed by either the Mayor, City Administrator, Chief of Police, Fire Chief or County Health Officer.
- 2) Following the emergency abatement action, a notice shall be served by personal service or by mail on the owner and/or responsible party connected with the property describing the nuisance, the action taken by the City, the reason emergency abatement was needed, and the costs incurred in abating the nuisance, which said costs shall be charged to the appropriate owner and/or responsible party as set out elsewhere in this ordinance. The notice shall also state that the owner

and/or responsible party shall have the right to appeal the emergency action abatement charge to the City Council, within 30 days after receiving the notice of said abatement. The City Council shall have the authority to waive the emergency abatement charge if the council, in its sole discretion, deems such waiver reasonable.

6.11 REPEAT NUISANCE CALLS SERVICE FEE

- A. Purpose: The purpose of this section is to protect the public safety, health and welfare and to prevent and abate repeat service response calls by the City to the same property or location for nuisance service calls, as defined herein, which prevent police or public safety services to other residents of the City. It is the intent of the City by the adoption of this Section to impose and collect service call fees from the owner or responsible party, or both, of property to which the City officials must repeatedly respond for any repeat nuisance event or activity that generates extraordinary costs to the City. The repeat nuisance service call fee is intended to cover the cost over and above the cost of providing normal law or code enforcement services and police protection City wide.
- B. Scope and Application: This Section shall apply to all owners and responsible party of private property, which is the subject or location of the repeat nuisance service call by the City. This Section shall apply to any repeat nuisance service calls as set forth herein made by an Arlington police officer.
- C. Definition of Nuisance Call or Similar Conduct:
 - 1) Any activity, conduct, or condition deemed as a public nuisance under any provision of City Ordinances.
 - 2) Any conduct, activity or condition constituting a violation of Minnesota state laws prohibiting or regulating prostitution, gambling, controlled substances, use of firearms; and
 - 3) Any conduct, activity, or condition constituting disorderly conduct under Chapter 609 of Minnesota Statutes.
- D. Repeat Nuisance Service Call Fee: The City may impose a repeat nuisance service call fee, said fee amount to be set from time to time by resolution of the City Council, upon the owner and/or responsible party of private property if the City has rendered services or responded to the property on three or more occasions within a period of 365 days in response to or for the abatement of nuisance conduct, activity or condition of the same or similar kind. The repeat nuisance service call fee under this Section shall be an amount as set forth and duly adopted by City Council resolution. All repeat nuisance service call fees imposed and charged against the owner or responsible party under this Section shall

be deemed delinquent 30 days after the City's mailing a billing statement, therefore. Delinquent payments are subject to ten percent late penalty of the amount due.

- E. Notice: No repeat nuisance service call fee may be imposed against an owner or responsible party of property without first providing the owner or responsible party with written notice of the prior nuisance service calls prior to the latest nuisance service call rendered by the City upon which the fee is imposed.

The written notice shall:

- 1) State the nuisance conduct, activity or condition that is or has occurred or is maintained or permitted on the property, the dates of the nuisance conduct, activity or condition.
- 2) State that the owner or responsible party may be subject to a repeat nuisance call service fee if a third or more nuisance service call is rendered to the property for the same nuisance, in addition to the City's right to seek other legal remedies or actions for the abatement of the nuisance or compliance with the law, and
- 3) Be serviced personally or by U.S. Mail upon the owner or responsible party at the last known address.

F. Right to Appeal Repeat Nuisance Service Call Fee:

- 1) Upon the imposition of a repeat nuisance service call fee, the City shall inform the owner or responsible party of his/her right to a hearing on the alleged repeat nuisance service calls. The owner or responsible party upon whom the fee is imposed may request a hearing by service upon the City Administrator at City Hall within 10 business days of the mailing of the fee invoice, inclusive of the day the invoice is mailed, a written request for hearing. The hearing committee shall schedule the hearing within 14 days of the date of the owner's or responsible party's request for hearing.
- 2) The hearing shall be conducted in an informal manner and the Minnesota Rules of Civil Procedure and Rules of Evidence shall apply. The hearing shall be taped but need not be transcribed at the sole expense of the party who requests the transcription. After considering all evidence submitted, the hearing committee shall make written findings of fact and conclusions on the issue of whether the City responded to or rendered services for repeat nuisance service calls of the same or similar kind on three or more occasions within a 365-day period. The findings and conclusions shall be serviced upon the owner or responsible party by U.S. Mail within five days of the conclusion of the hearing.

- 3) An owner or responsible party's right to a hearing shall be deemed waived if the owner or responsible party fails to serve written request for hearing as required herein or fails to appear at the scheduled hearing date. Upon waiver of the right to hearing, or upon the hearing officer's written findings of fact and conclusions that the repeat nuisance call service fee is warranted hereunder, the owner or responsible party shall pay the fee imposed and shall be deemed delinquent 30 days after the failure to appear at the appeal hearing or after the hearing committee's written findings of fact and conclusion.

- 4) Legal Remedies Nonexclusive: Nothing in this section shall be construed to limit the City's other available legal remedies for any violation of the law which may constitute a nuisance service call hereunder, including criminal, civil, injunctive or others.

Adopted by the City of Arlington on the 7TH day of November 2022.

Attest:

Mayor

City Administrator

First Reading: 11/7/2022
Second Reading: 11/21/2022
Adopted: 11/21/2022
Published: 11/24/2022



Councilmember _____ introduced the following resolution and moved for its adoption:

RESOLUTION 62-2022

A RESOLUTION APPROVING TERMS OF A LOAN TO GWEN SCHARPE FROM THE ARLINGTON EDA CHILD CARE LOAN PROGRAM.

WHEREAS, Gwen Scharpe, has applied for a Child Care Loan available through the EDA; and

WHEREAS, the Applicant requests a forgivable loan in the amount of \$1000 or fifty (50) percent of the actual project cost, whichever is less; and

WHEREAS, the purpose of the loan is to help new daycares by covering the costs of startup expenses, these expenses include: the MN State Fire Marshall check, Background check and license fee, Fire Extinguishers, Outlet Plugs, Baby Gate, Eating Utensils, Cots, Toys, Craft Supplies, and other requirements; and

WHEREAS, the EDA has reviewed the loan application to determine compliance with loan policies and procedures.

NOW, THEREFORE, BE IT RESOLVED, that the Arlington City Council hereby approves a childcare loan in the amount of \$1000 to Gwen Scharpe as follows:

1. The City and the EDA previously approved the EDA's Child Care Loan Program which is administered by the Arlington EDA.
2. Gwen Scharpe (the "Borrower") have submitted an official application form requesting financial assistance from the EDA Child Care Loan Program (the "Loan") in the amount of \$1000 or fifty (50) percent of the project cost, whichever is less in order to finance costs associated with starting a daycare.
3. The Loan is to be made from the EDA Child Care Loan Program and will be forgiven provided the Borrower remains in business on the Property for at least one year following the disbursement of the Loan and the and Project is substantially completed within a reasonable period of time defined as one hundred eighty (180) days.
4. The Board hereby approves the Loan proposed to be provided to the Borrower contingent on:
 - a. Execution of a Promissory Note by the Property Owner.
 - b. Submittal of valid receipts/invoices.
5. The Board has had an opportunity to review the Note to be executed by the Borrower. The Board hereby approves the form of Note.
6. Effective Date. This resolution shall be effective as of the date hereof.

The motion for the adoption of the foregoing Resolution was duly seconded by _____, and upon poll being taken thereon the following voted in favor thereof: _____ ; and

the following against the same: _____; and the following abstained from voting: _____; and the following were absent: _____.

Adopted by the City Council of the City of Arlington this 7th day of November, 2022.

Signed: _____
Mayor Richard Nagel

Attest: _____
City Administrator Shirley Slater-Schulte

Whereupon the resolution was declared duly passed and adopted and was signed by the Mayor whose signature was attested by the City Administrator.



Councilmember _____ introduced the following resolution and moved for its adoption:

RESOLUTION 63-2022

A RESOLUTION ACCEPTING A DONATION AND DESIGNATING ITS USE

WHEREAS, Minnesota State Statutes 465.03 states that cities may accept gifts of real or personal property, including money, and use them in accordance with the terms the donor prescribes; and

WHEREAS, the City may not, however, accept or use gifts for religious or sectarian purposes; and

WHEREAS, every such acceptance shall be by resolution of the governing body adopted by two-thirds majority of its members; and

WHEREAS, the City of Arlington has received a donation of a \$100.00 from Marlene Moskop to be used for the Cemetery Fund; and

WHEREAS, charitable contributions to governmental units are tax-deductible under Section 170(c)(1) of the Internal Revenue Code if made for public purpose, and

WHEREAS, the Arlington City Council would like to express its thankfulness for this gracious community support, and

NOW THEREFORE BE IT RESOLVED, pursuant to Minnesota State Statute 465.03 the Arlington City Council does hereby accept the aforementioned donation.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember _____; and upon poll being taken thereon the following voted in favor thereof: _____; and the following voted against the same: _____; and the following abstained from voting: _____; and the following were absent: _____.

The foregoing resolution was adopted by the City Council of the City of Arlington this 7th day of November 2022.

Signed: _____
Mayor

Attest: _____
City Administrator

Whereupon the resolution was declared duly passed and adopted and was signed by the Mayor whose signature was attested by the City Administrator.



Councilmember ____ introduced the following resolution and moved for its adoption:

RESOLUTION 64-2022

**A RESOLUTION RELATING TO DESIGNATING A COMBINED POLLING PLACE
LOCATION FOR ALL ELECTIONS IN 2023**

WHEREAS, The City of Arlington is an election precinct within the County of Sibley;

WHEREAS, pursuant to Minnesota Statutes, Section 204B.14, the Council may establish a combined polling place for multiple precincts, for all elections.

WHEREAS, pursuant to Minnesota Statutes, Section 204B.16, subd. 1, by December 31 of each year, the Council must designate by ordinance or resolution a polling place for each election precinct. The polling place designated in the ordinance or resolution is the polling place for the following calendar year, unless a change is made:

- (a) pursuant to section 204B.175;
- (b) because a polling place has become unavailable; or

THEREFORE, BE IT RESOLVED, it is hereby found, determined, and declared by the City Council of Arlington, State of Minnesota as follows:

The Council designates a combined polling place to serve all of the precincts located within the boundaries of the City of Arlington and the Township of Kelso for all elections in 2023 and the voting hours shall be between 7:00 a.m. and 8:00 p.m. The polling place is as follows:

POLLING PLACE:

Arlington Event Center f/k/a Arlington Community Center
204 Shamrock Drive
Arlington, MN 55307.

BE IT FURTHER RESOLVED, The City Administrator is hereby authorized and directed to file a certified copy of this resolution with the County Auditor-Treasurer of Sibley County by December 31, 2022 for the next calendar year.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember _____, and upon poll being taken thereon the following voted in favor thereof: _____; and the following were absent: _____.

The foregoing resolution was adopted by the City Council of the City of Arlington this 7th day of November, 2022.

Signed: _____
Mayor

Attested: _____
City Administrator

Whereupon the resolution was declared duly passed and adopted and was signed by the Mayor whose signature was attested by the City Administrator.

Gwen Scharpe

From: Amy Newsom
Sent: Wednesday, October 19, 2022 4:01 PM
To: Gwen Scharpe
Subject: Fw: Tony Hoff

Put on the next Council agenda.

Amy Newsom.

City Administrator



204 Shamrock Drive
Arlington, MN 55307
Phone: [507-964-2378](tel:507-964-2378)
Cell: [507-720-8586](tel:507-720-8586)
Fax: [507-964-5973](tel:507-964-5973)
www.arlingtonmn.com
anewsom@arlingtonmn.com

From: Heather Arneson <heather@arnesonlegal.com>
Sent: Tuesday, October 18, 2022 3:59 PM
To: Amy Newsom <anewsom@arlingtonmn.com>; Joe Morgan <jmorgan@arlingtonmn.com>; Matthew Scharpe <mscharpe@arlingtonmn.com>; Rich Nagel <rnagel@arlingtonmn.com>; Michelle Battcher <mbattcher@arlingtonmn.com>; Dave Meyer <dmeyer@arlingtonmn.com>; John Thomes <jthomes@arlingtonmn.com>
Subject: Tony Hoff

Dear Council,

The following information is to provide background for the future Council meeting discussion regarding Tony Hoff and the Arlington City Water System:

Lee Ortloff indicates that he was approached by Tony Hoff, who said he needed a water meter placed on a water line he installed to his shop. Lee was aware that no permit was issued for this, and no hook-up arrangements were made. Lee told Tony he should go through proper procedures for this.

Some time after they talked about this issue, Lee Ortloff found out that Tony approached Lee Forcier, and asked Forcier to install a water meter. Supposedly, Hoff told Forcier that Lee Ortloff authorized it, which was not the case.

The water meter was not installed. PeopleService used a shut-off valve that Hoff installed on the line to shut off the water flow.

We have no good way of knowing when this water line was installed. Lee Ortloff had the impression the water line may have been in place for a month or so before Tony Hoff inquired about a meter.

PeopleService believes that this act may violate Federal law, because it was an unauthorized incursion into the City of Arlington's water system.

I believe this could also be considered a criminal theft of services under Minnesota State law.

Based upon past experience talking with Hoff, we suspect he did not have criminal intent, but was being irresponsible.

At a minimum, it appears Hoff needs to apply to the City of Arlington for water service in the proper manner, and pay the appropriate fees. Perhaps, Lisa could calculate what the cost of one month's water usage would have been for that site and require Hoff to pay that. He will also need to excavate the water line so that PeopleService can inspect, and if necessary, change the connection to comply with Arlington City Code.

We are not aware that Hoff has any septic sewer service. Lee Ortloff said that service would have to connect to Olive Street and would have to be properly requested and installed.

On a separate minor note, some time ago, PeopleService allowed Hoff to fill up the water tank on a four-wheeler because Hoff helped the city with a project. He apparently decided that this gave him the right to continue doing so. This was off of the hydrant that was installed to provide water service to the new dog park. I understand Lisa has a note from someone that he filled up a 100 gallon tank three times. He should pay for that 300 gallons. I understand People Service is going to put a lock on that hydrant.

Thanks,

Ross R. Arneson
Arlington City Attorney
Arneson Law Office
302 West Main, P.O. Box 529
Arlington, MN 55307
Phone: 507-964-5753
Email: ross@arnesonlegal.com

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Amy Newsom

From: Amy Newsom
Sent: Friday, September 30, 2022 8:49 AM
To: Ross Arneson
Subject: RE: Tony Hoff

I don't think PeopleService allowed him to do it. He just went ahead and did it.

From: Ross Arneson <ross@arnesonlegal.com>
Sent: Thursday, September 29, 2022 5:06 PM
To: Amy Newsom <anewsom@arlingtonmn.com>; Rich Nagel <rnagel@arlingtonmn.com>
Subject: RE: Tony Hoff

Amy:

We can certainly demand he pay an estimated water bill.

We could charge him criminally with theft of services, but I presume the City does not want to do that?

People Service: what is their policy? They should not be letting people fill up from City sources unless they have prior approval and a payment arrangement.

Ross

From: Amy Newsom [<mailto:anewsom@arlingtonmn.com>]
Sent: Thursday, September 29, 2022 3:09 PM
To: Ross Arneson <ross@arnesonlegal.com>
Subject: Tony Hoff
Importance: High

Hi Ross –

I forgot to mention this to you. Tony Hoff hooked up to City water illegally. I notified Darin Haslip and had PeopleService shut him off. He needs a permit and to pay to be hooked up first. I don't know if there is anything that we can do to recoup that cost. PeopleService stated that he was also taking water from the WWTP for his gator? Whatever that is. Lisa has a note that he took 100 gallons 3 times (300 gallons) from the WWTP.

Amy R. Newsom

City Administrator
City of Arlington
204 Shamrock Drive
Arlington, MN 55307
507-964-2378 ext. 4
anewsom@arlingtonmn.com



Councilmember _____ introduced the following resolution and moved for its adoption:

RESOLUTION 59-2022

A RESOLUTION ADOPTING THE SIBLEY COUNTY ALL-HAZARD MITIGATION PLAN

WHEREAS, the City of Arlington has participated in the hazard mitigation planning process as established under the Disaster Mitigation Act of 2000, and

WHEREAS, the Act establishes a framework for the development of a multi-jurisdictional County Hazard Mitigation Plan; and

WHEREAS, the Act as part of the planning process requires public involvement and local coordination among neighboring local units of government and businesses; and

WHEREAS, the Sibley County Plan includes a risk assessment including past hazards, hazards that threaten the County, an estimate of structures at risk, a general description of land uses and development trends; and

WHEREAS, the Sibley County Plan includes a mitigation strategy including goals and objectives and an action plan identifying specific mitigation projects and costs; and

WHEREAS, the Sibley County Plan includes a maintenance or implementation process including plan updates, integration of the plan into other planning documents and how Sibley County will maintain public participation and coordination; and

WHEREAS, the Plan has been shared with the Minnesota Division of Homeland Security and Emergency Management and the Federal Emergency Management Agency for review and comment; and

WHEREAS, the Sibley County All-Hazard Mitigation Plan will make the county and participating jurisdictions eligible to receive FEMA hazard mitigation assistance grants; and

WHEREAS, this is a multi-jurisdictional Plan and cities that participate in the planning process may choose to also adopt the County Plan.

NOW THEREFORE BE IT RESOLVED that the City of Arlington supports the hazard mitigation planning effort and wishes to adopt the Sibley County All-Hazard Mitigation Plan.

The motion for the adoption of the foregoing resolution was duly seconded by Councilmember _____; and upon poll being taken thereon the following voted in favor thereof: _____; and the following

voted against the same: _____; and the following abstained from voting: _____; and the following were absent: _____.

The foregoing resolution was adopted by the City Council of the City of Arlington this 7th day of November 2022.

Signed: _____
Mayor

Attest: _____
City Administrator

Whereupon the resolution was declared duly passed and adopted and was signed by the Mayor whose signature was attested by the City Administrator.

SIBLEY COUNTY MINNESOTA



2021

Multi-Hazard Mitigation Plan



U-SPATIAL

UNIVERSITY OF MINNESOTA DULUTH

Driven to Discover

SIBLEY COUNTY MINNESOTA

MULTI-HAZARD MITIGATION PLAN

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Section 1 – Introduction

1.1 Introduction

Hazard mitigation is defined as any sustained action to reduce or eliminate long-term risk to human life and property from hazard events. The Federal Emergency Management Agency (FEMA) has made reducing hazards one of its primary goals, and a primary mechanism in achieving this goal is both the hazard mitigation planning process and the subsequent implementation of resulting projects, measures, and policies (FEMA, 2015).

From 1980 to 2020, damages due to natural disasters in the U.S. exceeded \$1.875 trillion. 2017 was the costliest year on record with \$306 billion in damage, and while the costliest disasters may occur in coastal states, in 2020, wildfires, hailstorms, drought, and tornadoes caused a record amount of billion-dollar disasters across the nation (Smith, 2020). Hazard mitigation planning is an effective process to prepare communities and lessen the impact of loss of life and property from future disasters. Although mitigation efforts will not eliminate all disasters, government at all levels should strive to be as prepared as possible for a disaster for the wellbeing of its citizens.

The Multi-Hazard Mitigation Plan (MHMP) is a requirement of the Federal Disaster Mitigation Act of 2000. The development of a local government plan is required to maintain eligibility for federal hazard mitigation grant funding programs. For communities to be eligible for future mitigation funds, they must adopt an MHMP.

Researchers at the National Institute of Building Sciences looked at the results of 23 years of federally funded mitigation grants provided by FEMA, the U.S. Economic Development Administration (EDA), and the U.S. Department of Housing and Urban Development (HUD). Their findings revealed that for every \$1 spent on hazard mitigation funding in the nation, \$6 is saved in future disaster costs (Multi-Hazard Mitigation Council, 2019).

Sibley County is vulnerable to a variety of natural hazards that threaten the loss of life and property in the county. Hazards such as tornadoes, flooding, wildfires, blizzards, straight-line winds, and droughts have the potential for inflicting vast economic loss and personal hardship.

This MHMP represents the efforts of Sibley County and its local governments to fulfill the responsibility of hazard mitigation planning. The intent of the plan is to limit the damages and losses caused by specific hazards.

1.1.1 SCOPE

U-Spatial, University of Minnesota, was contracted by MN Homeland Security and Emergency Management using FEMA Pre-Disaster Mitigation (PDM) grant funds to work with Sibley County Emergency Management to facilitate an update to the 2015 Sibley County MHMP. U-Spatial brings extensive geographic data analysis skills and hazard risk assessment expertise to the process. U-Spatial also employed the services of Hundrieser Consulting LLC for county and stakeholder outreach as well as mitigation action development related to this plan.

This MHMP evaluates and prioritizes the major natural hazards affecting Sibley County as determined by frequency of event, economic impact, deaths, and injuries. Mitigation recommendations are based on input from state and local agencies, the public, and national best practices.

U-Spatial performed the hazard risk assessment for 1-percent annual chance floods (also known as 100-year floods) using the FEMA Hazus GIS tool. The Minnesota Homeland Security and Emergency Management (HSEM) office, which is a division of the Minnesota Department of Public Safety, has determined that Hazus should play a critical role in Minnesota's risk assessments.

This is a multi-jurisdictional plan that covers Sibley County, including the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, New Auburn, and Winthrop. The Sibley County mitigation activities identified in this plan also incorporate the concerns and needs of townships, school districts, and other participating entities.

Members from each of these jurisdictions actively participated in the planning process by assisting with public outreach, attending planning team meetings, providing local information, identifying mitigation actions, and reviewing the plan document (see Appendix C). The information in these forms was used to help identify mitigation actions for local implementation (see also Section 2.2). Each jurisdiction will adopt the plan by resolution after the plan is approved by FEMA. County and local city resolutions will be added by Sibley County after final approval by FEMA (see Appendix D).

Sibley County has specified the following goals for this MHMP update:

- Include more recent data documenting the critical infrastructure and hazards faced by Sibley County.
- Reformat and reorganize the plan to reflect definitions of hazards as expressed in the 2019 State of Minnesota Multi-Hazard Identification and Risk Assessment Plan.
- Reflect current hazard mitigation priorities in Sibley County.

1.1.2 HAZARD MITIGATION DEFINITION

Hazard mitigation may be defined as any action taken to eliminate or reduce the long-term risk to human life and property from natural hazards. The benefits of hazard mitigation planning include the following:

- saving lives, protecting the health of the public, and reducing injuries
- preventing or reducing property damage

- reducing economic losses
- minimizing social dislocation and stress
- reducing agricultural losses
- maintaining critical facilities in functioning order
- protecting infrastructure from damage
- protecting mental health
- reducing legal liability of government and public officials

1.2 State Administration of Mitigation Grants

FEMA currently has three mitigation grant programs that are administered by the State of Minnesota: the Hazard Mitigation Grant Program (HMGP), the Building Resilient Infrastructure and Communities (BRIC) program, and the Flood Mitigation Assistance (FMA) program. The HMGP, BRIC, and FMA programs are administered through the state of Minnesota Department of Public Safety HSEM Division. All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include state and local governments, certain private non-profit organizations or institutions, and tribal communities.

Section 2 – Public Planning Process

2.1 Planning Team Information

The Sibley County MHMP planning team is headed by the Sibley County emergency manager, who is the primary point of contact. Members of the Sibley County MHMP planning team include representatives from the public and governmental sectors. Table 1 identifies the planning team individuals and the organizations they represent.

Jurisdictional representatives were contacted throughout the HMP process to help facilitate local participation and provide feedback on the hazards of concern to their communities. This feedback was used to develop local mitigation actions that they would seek to implement upon plan adoption (see Section 6.3 and Appendix J).

Table 1. Multi-Hazard Mitigation Planning (MHMP) Team

Name	Agency/Organization	Participant Title
Andrew Hayden	Sibley County Sheriff's Office	Emergency Management Director
Patrick Nienaber	Sibley County Sheriff's Office	County Sheriff
Tim Becker	Sibley County Public Works Department	Public Works Director
Scott Beebe	Sibley County Public Works Department	Drainage System Manager
Joel Wurscher	Sibley County SWCD	District Manager
Bobbie Harder	Sibley County Board of Commissioners	Commissioner
Jesse Lutterman	Sibley County GIS	GIS Coordinator
John Gliszinski	Sibley County	County Administrator
Steve Saxton	Sibley County	County Commissioner
Marilee Peterson	Sibley County	County Auditor-Treasurer
Amy Newsom	City of Arlington	City Administrator
John Zaske	City of Arlington	Fire Chief
Jaime Weikle	City of Arlington	Ambulance Director
Andrew Koenchne	City of Arlington	Chief of Police
Kirby Weckworth	City of Arlington	Maintenance Supervisor
Charlie Eichten	City of Gaylord	Chief of Police
Dana Lietzau	City of Gibbon	City Administrator
Jason Rettig	City of Gibbon	Public Works Director
Scott Vos	City of Green Isle Fire-Rescue	Fire Chief
Lon Berberich	City of Henderson	City Administrator
Tom Phillips	City of Henderson	City Emergency Manager
Jasper Kruggel	City of Le Sueur	City Administrator
Justin Nielsen	City of Le Sueur	City Emergency Manager
Roberta Zaske	City of New Auburn	City Clerk-Treasurer
Joey Schuft	City of New Auburn	Maintenance Supervisor
Jenny Palmer	City of Winthrop	City Administrator

Name	Agency/Organization	Participant Title
Mark Marcy	MN DPS/HSEM	Region V Regional Program Coordinator
Marlene Johnson	Le Sueur-Henderson Public Schools ISD 2397	Superintendent
Jim Amsden	Sibley East Schools ISD 2310	Superintendent
Chad Briese	MN Valley Electric Cooperative	Director of Safety/Environmental Compliance
Doug Grindberg	USDA Rural Development	Area Specialist
Ann Traxler	Le Sueur County Emergency Management	Emergency Management Director
Tammy Stewig	Le Sueur County Emergency Management	Deputy Emergency Management Director
Mike Hennen	Renville County Emergency Management	Emergency Management Director
Kevin Mathews	McLeod County Sheriff's Office	Emergency Management Director

2.2 Review of Existing Plans, Capabilities & Vulnerabilities

Sibley County and its local communities utilized a variety of planning documents to direct community development. These documents included a Comprehensive/Master Plan, Emergency Operations Plan, Transportation Plan, etc. (see Appendix D for a full listing of plans and programs in place in Sibley County). The planning process also incorporated the existing natural hazard mitigation elements from previous planning efforts. In addition, the 2019 Minnesota All-Hazard Mitigation Plan was consulted.

In the development of the Sibley County MHMP, U-Spatial consultants reviewed and incorporated a variety of planning documents that direct community development and influence land use decisions for the county and its jurisdictions. In addition, U-Spatial consultants worked closely with the Sibley County Emergency Management Director and other key county staff and local city officials to collect feedback on local mitigation capabilities and vulnerabilities that either support or hinder the ability to mitigate against natural hazards at the county and local level. Following is a summary of the assessment tools used to gather information on local capabilities and vulnerabilities during the planning process:

Capabilities Assessment (hazard-specific): In this assessment, detailed information was collected from Sibley County on current plans and programs in place (i.e., existing programs, plans, or policies) as well as program gaps or deficiencies that currently exist to mitigate against damages caused by each natural hazard addressed in the plan. Section 5 identifies current gaps and deficiencies for mitigation and Section 6.1.3 describes the mitigation capabilities that are in place by Sibley County to support mitigation.

Local Mitigation Surveys: As part of Sibley County's 2021 MHMP update, participating jurisdictions and key county personnel were asked to fill out a Local Mitigation Survey (LMS) form. Questions in the LMS form addressed the following:

- Part A: Hazard Identification, Risk Assessment & Vulnerability Analysis
- Part B: Local Mitigation Capabilities Assessment
- Part C: Local Mitigation Projects
- Part D: Survey Participants.

The purpose of the survey was to gather jurisdictionally specific information needed to support the update of the plan and to help inform development of local-level mitigation actions for the next five-year planning cycle (for the full Sibley County LMS report, see Appendix C).

2.3 Planning Process Timeline and Steps

In order to update the 2015 Sibley County MHMP, U-Spatial consultants worked in coordination with the Sibley County Emergency Management and members of the planning team. The updated plan includes new data documenting the types of hazards faced by Sibley County residents and emergency planning officials as well as new thinking on how to address these hazards.

2.3.1 SIBLEY COUNTY STAKEHOLDER COORDINATION

On May 1, 2020, U-Spatial hosted an online kickoff meeting that was attended by the Sibley County Emergency Manager. The webinar included a project overview, U-Spatial's background, the roles and responsibilities of the Emergency Manager, the contents of the MHMP, the planning process, and the projected timeline of the project (see Appendix F for webinar slides).

On June 2, 2020, Sibley County issued a news release inviting public feedback and participation for the Sibley County MHMP update (for complete documentation, see Appendix G).

A planning team meeting took place on September 15, 2020, via Zoom video conference hosted by U-Spatial. Meeting participants included representatives from Sibley County, city and township governments, neighboring jurisdictions, and other key stakeholders. The planning team was provided with an overview of the purpose, process, and timeline for the Sibley County MHMP update, as well as the roles and responsibilities of planning team members. During the meeting, participants discussed the prioritization of natural hazards facing the county and local jurisdictions, provided feedback on plans and programs in place, and identified mitigation actions that would reduce future risk. Information gathered during this meeting was used to inform the development of mitigation strategies in the updated plan. See Appendix F for a full meeting summary.

On October 1, 2021, members of the MHMP planning team convened again via Zoom video conference with U-Spatial presenters. Together, they conducted a review of and discussed the updated risk assessment for Sibley County. Draft mitigation strategies were developed for Sibley County and each city participating in the plan (see Appendix F).

In order to provide opportunity for public input, Sibley County issued a second news release on December 13, 2021, inviting public review and feedback on the draft plan. The news release provided information on where to view the plan and submit comments. U-Spatial hosted a webpage to post the full draft of the Sibley County MHMP, including excerpts of the Sibley County Master Mitigation Action Chart, each jurisdictional mitigation action chart, and an electronic feedback form.

Table 2 documents Hazard Mitigation update meetings and public outreach. Appendix G provides documentation of the public outreach for feedback on the draft plan by Sibley County and jurisdictions. The public feedback period for the draft plan was open from 12/13/21 to 12/26/21, for a total of 14 days.

Table 2. Sibley County Hazard Mitigation Update meetings and public outreach

Event	Date	Appendix
Kickoff Webinar	5/1/20	Appendix F, Planning Team Meetings
News Release #1	6/2/20	Appendix G, Public Outreach & Engagement Documentation
Planning Team Meeting #1	9/15/20	Appendix F, Planning Team Meetings
Planning Team Meeting #2	10/1/21	Appendix F, Planning Team Meetings
News Release #2	12/13/21	Appendix G, Public Outreach & Engagement Documentation

At the close of the public outreach period, the U-Spatial consultants worked with the Sibley County Emergency Manager and members of the planning team to incorporate feedback from the public into the Multi-Hazard Mitigation Plan.

For more information on the planning process, see Sections 6 and 7.

2.3.2 OVERVIEW OF JURISDICTIONAL PARTICIPATION

Throughout the planning process, Sibley County and the U-Spatial team worked to engage representatives from the county and each city in the update of the plan. Key activities for jurisdictions included assisting with public outreach, participating in planning team meetings, providing local-level information, reviewing and providing feedback to the plan update.

U-Spatial and Sibley County actively used the following methods to engage jurisdictions in the MHMP plan update process:

- **Zoom Video Conferencing:** Planning team meetings were conducted via Zoom video conferencing hosted by U-Spatial. The use of virtual meetings was used to engage stakeholders remotely during Covid-19 pandemic restrictions. Virtual meetings proved to be a beneficial addition to the planning process, resulting in a high turnout from jurisdictional representatives and other stakeholders, as well as providing the ability for presenters to collect, respond to, and document feedback from participants through Zoom functions such as surveys, chat, and Q&A.
- **Email Correspondence:** Email was a primary tool used to communicate with representatives from Sibley County, municipal governments, and other stakeholders. Emails were used to distribute news releases for public outreach, to invite participation in meetings and to share meeting summaries, as well as to request local-information and final review of the draft plan. Email proved to be an effective tool that resulted in increased jurisdictional participation and collection of locally specific information. Email was also used by the public to submit feedback to Sibley County following news releases on the MHMP.
- **Phone Calls:** Phone calls were frequently used to conduct direct outreach or follow-up to jurisdictions to ensure participation or to collect information via one-on-one interviews. Phone calls proved to be an effective tool that resulted in increased jurisdictional participation and collection of quality information. Phone calls were especially useful in engaging very small communities that had limited staff or technological capabilities.

Cities participating in Sibley County MHMP update varied by population and associated government resources to participate in the planning process (i.e., personnel, time, and technology). Rural communities with smaller populations (under 500) typically had part-time elected officials, limited to no city staff, and reduced City Hall hours in which to conduct business. Sibley County and U-Spatial were sensitive to these local challenges and worked to help these local governments to participate using the methods that worked best to accommodate them, such as phone interviews to complete local mitigation survey forms (see Appendix C).

Table 3 provides an overview of the participation of each city that took part in the Sibley County MHMP update planning process, with reference to the location of supporting documentation.

Table 3. Jurisdictional participation in planning process

Jurisdiction (Population)	News Release #1	Planning Team Mtg. #1	Local Mitigation Survey	Mitigation Action Chart	Planning Team Mtg. #2	News Release #2 & Plan Review
Sibley County (14,836)	X	X	X	X	X	X
City of Arlington (2247)	X	X	X	X	X	X
City of Gaylord (2273)	X	X	X	X	X	X
City of Gibbon (784)	X	X	X	X	X	X
City of Green Isle (591)	X	X	X	X	X	
City of Henderson (960)	X	X	X	X	X	X
City of Le Sueur (4213)	X	X	X	X	X	
City of New Auburn (411)	X	X	X	X	X	X
City of Winthrop (1332)	X	X	X	X		X
Neighboring Jurisdictions:						
Le Sueur County		X			X	
McLeod County		X			X	
Carver County						
Scott County						
Nicollet County						
Renville County					X	

Section 3 – Sibley County Profile

3.1 General County Description

Sibley County is located in the south-central region of Minnesota, approximately 50 miles southwest of the Minneapolis/St. Paul metropolitan area. It is bounded on the north by McLeod County, on the west by Renville County, on the south by Nicollet County, and by Carver, Scott, and Le Sueur Counties to the east. The land area of the county is comprised of approximately 600 square miles and there are 35 lakes and 3 major watersheds.

There are 8 cities and 17 townships in Sibley County. The city of Gaylord is the county seat and most populated city and contained a population of 2,305 in 2010. The county had an estimated total population of 14,865 in 2019.

Sibley County is largely agricultural. The majority of the land is cropland, with corn and soybeans being the primary crops. There is one privately owned airport in the northeastern corner of the county.

3.2 Environmental and Geologic Characteristics

Land surface characteristics in Sibley County are the result of glacial ice and flowing water. The surficial materials are the deposits, collectively called drift, of continental glaciers centered in Canada and extending into southern Minnesota. The glaciers advanced and retreated, creating ground moraines. The intervals between glacial episodes created the deep erosion and weathering of drift and bedrock surfaces in Sibley County.

The bedrock that underlies eastern Sibley County is early Paleozoic rock consisting of three major types: sandstone, shale and carbonates. The bedrock was deposited into a shallow depression called the Hollandale Embayment (shallow marine waters that flooded southern Minnesota about 500 million years ago). The western end of the county was void of the Paleozoic-age Hollandale Embayment. The transcontinental arch is found on the western end and consists primarily of Precambrian igneous and metamorphic rocks, including granites and granitic gneiss that are capped in many areas with Sioux quartzite. Other areas of the county are composed of alluvium, glacial outwash deposits of sand and gravel, and a small amount of glacial lacustrine. Glacial outwash can be found along the Minnesota River in a belt one to five miles wide running southeast of Gaylord to areas along the Nicollet County border.

The highest elevation in Sibley County is 1,085 feet, located in the northwest corner of the county, in Grafton Township; the lowest elevation, at 700 feet, is where the Minnesota River leaves the county along the northern border. More than 80% of the county consists of level and gently sloping till plain with local relief of three to ten feet (Only 6% has local relief of 10 to 30 feet).

3.3 Hydrography

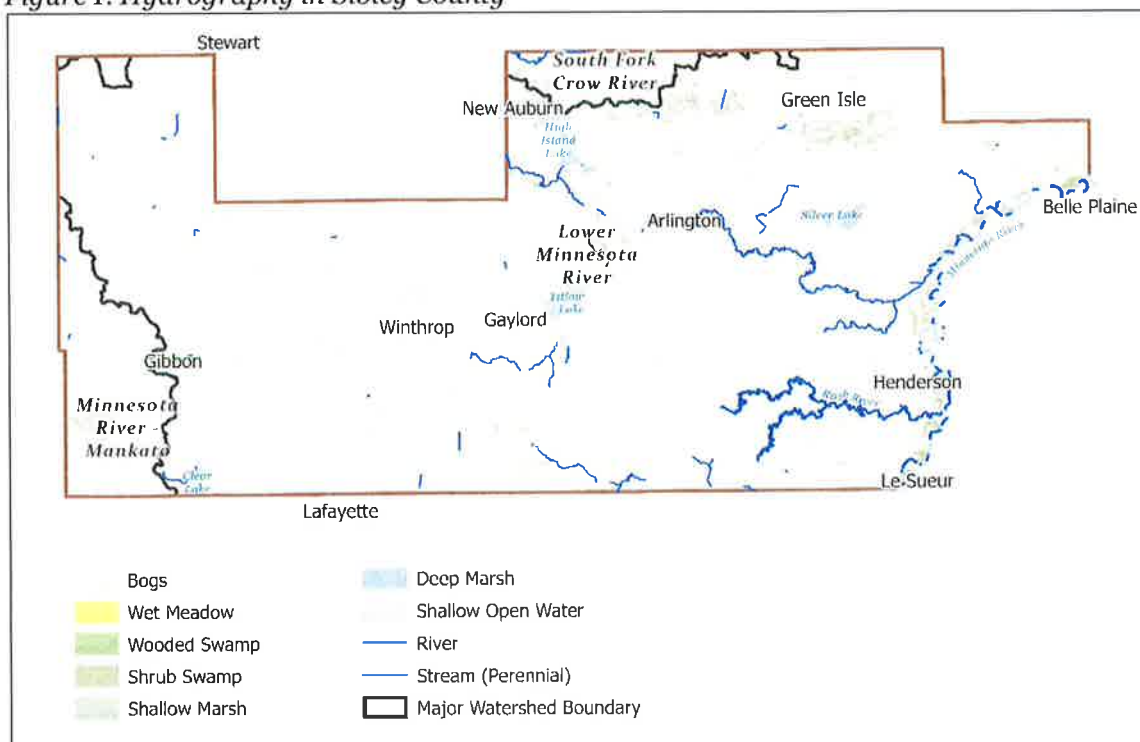
The majority (97%) of Sibley County within the Minnesota River basin while a portion (3%) of its northern edge lies within the Upper Mississippi River basin. There are three major watersheds in Sibley, including

the Minnesota River – Mankato, Minnesota River – Shakopee, and the South Fork Crow River watersheds. The Minnesota River – Shakopee watershed is the largest, spanning over 547 square miles within Sibley County, or 91% of the county’s area.

Sibley County contains a number of Protected (i.e. Public) Waters, which are lakes, wetlands, and watercourses regulated by the Minnesota DNR. The inventory of the protected waters in the county includes 35 lakes, 18 watercourses (rivers and streams), and 11 wetlands (MN DNR, 2019a).

Waters across the State are continuously monitored for pollution and invasive species. The Minnesota Pollution Control Agency (MPCA) measures water pollutant levels. Waterbodies that do not meet water quality standards are designated as impaired and sent to the Environmental Protection Agency (EPA), along with pollutant-reduction goals to restore these waters (MPCA, 2017). The Minnesota Department of Natural Resources (MN DNR) is responsible for tracking and stopping the spread of aquatic invasive species. Waters with invasive species are labeled as infested. The basic hydrography of Sibley County is mapped in Figure 1.

Figure 1. Hydrography in Sibley County



SOURCE: (MN DNR, 2013, 2019c, 2021c)

3.3.1 LAKES

There are 35 lakes in Sibley County. The largest of these lakes is High Island Lake which spans 1,340 acres. It contains 17 miles of shoreline, most of which border agricultural crop fields or pasture. The town of New Auburn borders the lake on the west shore. These lakes cover 6,754 of the county’s 384,000 acres (1.8%). (MN DNR, 2021c).

The MPCA classifies the following lakes as “impaired”: Clear Lake, High Island Lake (Main Basin), Silver Lake, and Titlow Lake (MPCA, 2020). Lakes in Sibley County have been identified as “impaired” due to pollutants or stressors found in these waters; examples include eutrophication. Impaired waters do not meet the State’s water quality standards and they affect growth and health of communities and economies. The Clean Water Act has a mandate requiring every state to address impairments (US EPA, 2015).

Lakes that are infested with an aquatic invasive species are also of concern (MN DNR, 2020d). Fortunately, the MN DNR does not document any lakes in Sibley County as infested with an invasive aquatic species.

3.3.2 RIVERS

Two major rivers flow through Sibley County: the Minnesota River and the Rush River. Both rivers are tributaries of the Mississippi River. The Rush River begins at the confluence of its Middle and North Branches and is joined by its South Branch just downstream of that junction. The 332-mile-long Minnesota River forms the eastern boundary of Sibley County and drains a watershed of approximately 17,000 square miles. The MN DNR classifies the sections of the Minnesota River from State Hwy 4 to LeSueur, and LeSueur to Fort Snelling as state water trails. Both of these sections border Sibley County.

The MPCA classifies a number of rivers in Sibley County as “impaired”, including: Rush River (North, Middle, and South Branch (MN DNR, 2020d).

3.3.3 WETLANDS

The term “wetland” is defined by the Minnesota Legislature as “...areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Wetland Standards and Mitigation, 2016). Important benefits of wetlands include storage area for excess water during flooding; filtering of sediments and harmful nutrients before they enter lakes, rivers, and streams; and fish and wildlife habitat.

Sibley County contains wetlands mostly in the northern half of the county. These wetlands total 31,271 acres and cover 8% of the county (MN DNR, 2019c). These wetlands are mostly seasonally flooded basin (13,403 acres), shallow marsh (6,341 acres) and shallow open water (6,326 acres) (MN DNR, 2019d). The variety of wetland types are presented in the hydrography map in Figure 1.

Although not as prevalent as in lakes and rivers, the MPCA has identified a number of impaired wetlands throughout Minnesota; fortunately, none of these wetlands are located in Sibley County.

3.3.4 GROUNDWATER

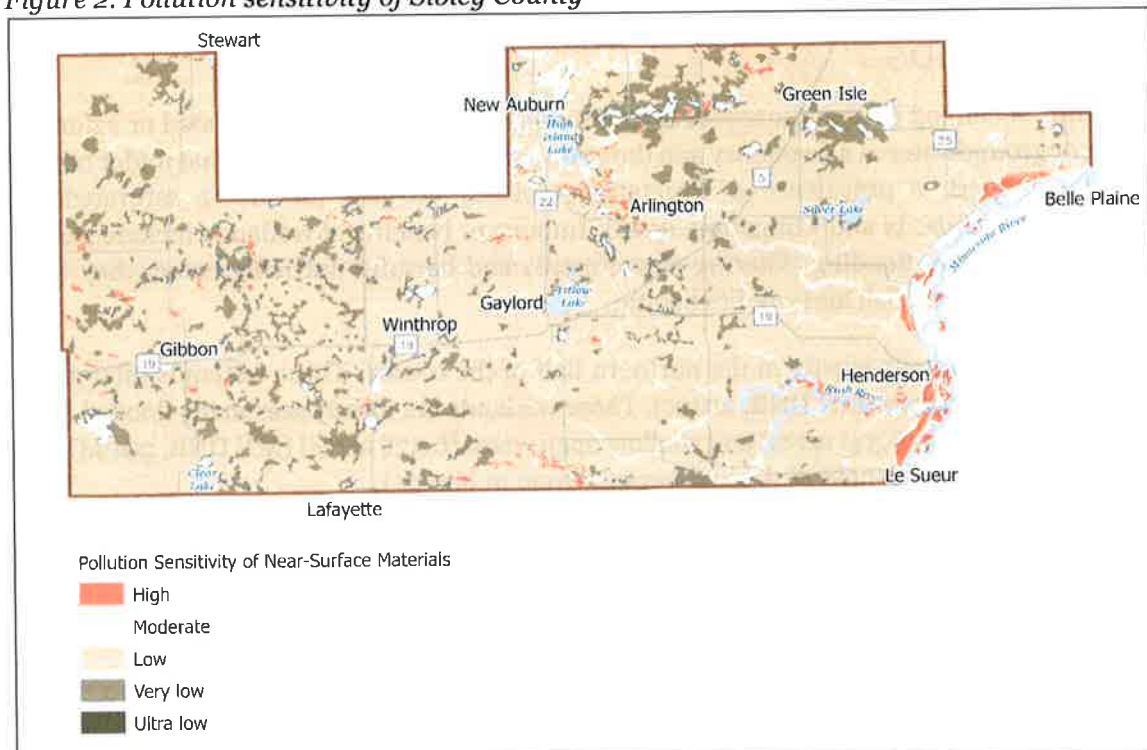
Sibley County. The Minnesota Department of Natural Resources has published a County Geologic Atlas of Sibley’s Hydrogeology that provides information on the sources and uses of groundwater in the county. Perhaps most significant, 72% of the groundwater in this county used for municipal water purposes.

Chemical processing uses 24% of the county's groundwater. 2% of groundwater is used for golf course irrigation while livestock watering accounts for 1.8% of the groundwater use in the county (MPCA, 2015).

Groundwater is found in unconsolidated glacial deposits that are typically clayey and contain limited extent surficial and buried sand aquifers, as well as in the underlying bedrock. The eastern part of the county contains sedimentary bedrock aquifers while the western part of the county has fractured bedrock buried deeply beneath glacial sediments. 67% of the county's groundwater is obtained from buried sand and gravel aquifers, while 33% of the groundwater is pumped from bedrock (MPCA, 2015).

With such an abundance of groundwater available, it is important to examine how sensitive this natural resource is to pollution. Groundwater sensitivity to pollution is measured by flow rate and soil permeability. Figure 2 maps pollution sensitivity of near-surface materials based on the time it takes water to travel through three feet of soil and seven feet of surficial geology, to a depth of ten feet from the land surface (Adams, 2016). The total travel time is then categorized into five sensitivity classes, ranging from high (<=170 hours) to ultra-low (>8,000 hours). Areas with special geologic conditions, such as karsts, peatlands, bedrock at or near the surface, and disturbed lands (e.g., open pit mines) require individual consideration. Of these special condition areas, only karst areas have been assigned a sensitivity ranking ("very high") due to karst areas consistently showing very fast water infiltration rates. The remaining special condition areas are classified together as they cannot be assigned a sensitivity ranking using the same methodology (MN DNR, 2020c).

Figure 2. Pollution sensitivity of Sibley County



SOURCE: (MPCA, 2018A)

3.4 Climate

According to the Köppen climate classification system, Sibley County’s climate is classified as “Dfa”—a humid continental climate region with large seasonal temperature contrasts with precipitation distributed throughout the year (no dry season) and at least four months of the year averaging above 50° F but the warmest month averaging below 71.6 F° and at least one month averaging above 71.6 F° (Arnfield, 2020).

Since 1895, climate in the United States has been analyzed using the Climate Divisional Dataset. The boundaries of climate divisions have evolved significantly over the years: beginning in 1909 with 12 climatological districts that followed the principal drainage basins, to the current 344 climate divisions based largely on the USDA Bureau of Agricultural Economics Crop Reporting Districts (Guttman & Quayle, 1996). Climate division temperature, precipitation, and drought values are derived from the values reported by the weather stations in each climate division. In 2014, new methodologies to compute the climate division data were implemented, improving the data coverage and quality of the dataset (NOAA, 2020).

Table 4 displays monthly Climate Normals (three-decade averages) of temperatures as reported by the climate division in which Sibley County is located.

Table 4. Sibley County average monthly temperature, 1981–2010; 1990–2020

Month	MN Climate Division 5	MN Climate Division 5	MN Statewide	MN Statewide
	1981–2010	1990–2020	1981–2010	1990–2020
January	11.9°F	12.1°F	9.9 °F	10.1 °F
February	17.3°F	16.6°F	15.4 °F	14.7 °F
March	29.7°F	29.7°F	27.9 °F	27.8 °F
April	44.8°F	43.7°F	42.9 °F	41.9 °F
May	57.0°F	56.6°F	55.1 °F	54.8 °F
June	66.4°F	66.6°F	64.4 °F	64.8 °F
July	70.9°F	70.8°F	69.0 °F	69.0 °F
August	68.4°F	68.3°F	66.8 °F	66.8 °F
September	59.3°F	60.3°F	57.7 °F	58.6 °F
October	46.4°F	46.7°F	44.8 °F	45.1 °F
November	30.7°F	31.5°F	29.2 °F	29.8 °F
December	16.1°F	18.2°F	14.5 °F	16.5 °F

SOURCE: (MIDWESTERN REGIONAL CLIMATE CENTER, 2021)

3.4.1 CLIMATE CHANGE ADAPTATION

Minnesota’s climate is currently changing in ways that are pushing us to adapt to weather patterns and extreme events that pose major threats to our health, homes, environment, and livelihoods. These events cost our state millions in property loss, damaged infrastructure, disrupted business, medical care, and support services, and put residents and responders at risk. Understanding how our weather is changing now and into the future will help planners and decision-makers in emergency management and supporting fields extend our progress in climate adaptation and lead to more resilient communities (MDH, 2018).

The National Climate Assessment suggests that infrastructure planning (particularly water resources infrastructure) should “be improved by incorporating climate change as a factor in new design standards and asset management and rehabilitation of critical and aging facilities, emphasizing flexibility, redundancy, and resiliency” (Georgakakos, et al., 2014).

Federal, state, and tribal governments are increasingly integrating climate change adaptation into existing decision-making, planning, or infrastructure-improvement processes (Georgakakos, et al., 2014). Definite predictions are difficult to make, as changes may vary depending on geographical location, even within Minnesota. Intense study of these topics is ongoing.

Rural communities are particularly vulnerable to climate change, due to their dependence upon natural resources, physical isolation, limited economic diversity, higher poverty rates and aging populations. According to *Climate Change Impacts in the United States: The Third National Climate Assessment*,

Warming trends, climate volatility, extreme weather events, and environmental change are already affecting the economies and cultures of rural areas. Many rural communities face considerable risk to their infrastructure, livelihoods, and quality of life from observed and projected climate shifts. These changes will progressively increase volatility in food commodity markets, shift the ranges of plant and animal species, and, depending on the region, increase water scarcity, exacerbate flooding and coastal erosion, and increase the intensity and frequency of wildfires across the rural landscape (Hales et al., 2014).

The Assessment also notes that transportation systems in rural areas are more vulnerable to risks such as flooding since there are typically fewer transportation options and infrastructure redundancies. In addition, power and communication outages due to severe weather events typically take longer to repair in rural areas, which can increase the vulnerability of elderly populations. Rural area populations are also more vulnerable since they typically have limited financial resources to deal with the effects of climate change.

The composition of the region’s forests is expected to change as increasing temperatures shift tree habitats northward. While forests in the Midwest are currently acting as a net absorber of carbon, this could change in the future due to projected increases in insect outbreaks, forest fires, and drought, which will result in greater tree mortality and carbon emissions (Pryor et al., 2009).

3.4.2 CLIMATE DATA TRENDS

Over 50 years of storm data on record document that Minnesota has experienced an increase in the number and strength of weather-related natural disasters, particularly those related to rising temperatures and heavy downpours. According to the 2015 Minnesota Weather Almanac,

During the three most recent decades, the Minnesota climate has shown some very significant trends, all of which have had many observable impacts...Among the detectable measured quantity changes are: (1) warmer temperatures, especially daily minimum temperatures, more weighted to winter than any other season; (2) increased frequency of high dew points, especially notable in mid- to late

summer as they push the Heat Index values beyond 100°F; and (3) greater annual precipitation, with a profound increase in the contribution from intense thunderstorms (Seeley M. , 2015).

Temperature and precipitation projections below are taken from the Minnesota Department of Health (MDH) Region 5 profile. Appendix H provides the full MDH profile for Region 5, which includes Sibley County. This report is one of a series of custom climate profile reports produced for each of the six HSEM regions in the state for reference to climate change projection data, impacts, and considerations for emergency management and preparedness professionals in this HSEM region. The information in this report was used to help inform the updated risk assessments in Section 4 of this plan for natural hazards and their relationship to climate change.

Temperature

The 2018 MDH report details how average temperatures have been affected by climate change:

There has been an increase in winter and summer temperatures. Our average winter lows are rising rapidly, and our coldest days of winter are now warmer than we have ever recorded. In fact, Minnesota winters are warming nearly 13 times faster than our summers. The continued rise in winter temperatures will result in less snowpack, which will increase chances for grassland/wildfires as well as drought. The warmer winter temperatures will also have major consequences for our ecosystems, including native and invasive species, whose growth, migration, and reproduction are tied to climate cues. The increase in Lyme disease across Minnesota is also likely influenced in part by the loss of our historical winters, due to a longer life-cycle period for ticks. Freeze-thaw cycles are likely to increase as well, damaging roads, power lines, and causing hazardous travel conditions. By mid-century our average summer highs will also see a substantial rise, coupled with an increase in more severe, prolonged heat waves that can contribute to drought and wildfires and pose a serious health threat, particularly to children and seniors. (MDH, 2018)

Changes in average temperatures are detailed in Table 5.

Table 5. Temperature Trends for HSEM Region 5

Average Summer Maximum Temperature			Average Winter Minimum Temperature		
1981–2010	2050–2075	Change	1981–2010	2050–2075	Change
82.1 °F	89.6 °F	+7.5 °F	7.9 °F	16.9 °F	+9.0 °F

SOURCE: (MDH, 2018)

Increasing temperatures impact Minnesota’s agricultural industry. As a result of increasing temperature, crop production areas may shift to new regions of the state where the temperature range for growth and yield of those crops is optimal. According to the National Climate Assessment, the Midwest growing season has lengthened by almost two weeks since 1950 due in large part to earlier timing of the last spring freeze. This trend is expected to continue. While a longer growing season may increase total crop production, other climate changes, such as increased crop losses and soil erosion from more frequent and intense storms and increases in pests and invasive species, could outweigh this benefit.

There may be higher livestock losses during periods of extreme heat and humidity. Losses of livestock from extreme heat led to a challenge in the disposal of animal carcasses. Currently there are only two rendering facilities in Minnesota available for livestock disposal. To minimize the detrimental effects of heat stress on animal metabolism and weight gain, Minnesota farmers have also begun redesigning and retrofitting dairy, hog, and poultry barns with better watering, feeding, and ventilation systems (Seeley, 2015).

Precipitation

Climate change has also affected precipitation, as described in detail in the 2018 MDH report:

There has been an increase in total average as well as heavy precipitation events, with longer periods of intervening dry spells. Our historical rainfall patterns have changed substantially, giving rise to larger, more frequent heavy downpours. Minnesota’s high-density rain gauge network has captured a nearly four-fold increase in “mega-rain” events just since the year 2000, compared to the previous three decades. Extreme rainfall events increase the probability of disaster-level flooding. However, there is also an increased probability that by mid-century heavy downpours will be separated in time by longer dry spells, particularly during the late growing season. Over the past century, the Midwest has not experienced a significant change in drought duration. However, the average number of days without precipitation is projected to increase in the future, leading Minnesota climate experts to state with moderate-to-high confidence that drought severity, coverage, and duration are likely to increase in the state. Modeling future precipitation amounts and patterns is less straight-forward compared to temperature. Some climate models do a better job than others representing rainfall for the Midwest, and available data sources only provide average estimates on a monthly scale, masking the spikes in extremes that trigger flood and drought disasters. (MDH, 2018)

3.5 Demographics

Sibley County contains eight cities and seventeen townships. In 2010, Sibley County had a population of 15,226, averaging 26 people per square mile of land area (U.S. Census Bureau, 2020b). The county seat, Gaylord City, is the largest city in the county with a 2010 population of 2,305. Table 6 lists the communities in Sibley County along with their respective population numbers.

Table 6. Sibley County Population by Community, 2010 and 2020

Community	2010 Population	2020 Population	% of County 2020
Alfsborg Township	323	285	1.92%
Arlington City	2,233	2247	15.15%
Arlington Township	543	475	3.20%
Bismarck Township	314	323	2.18%
Cornish Township	243	241	1.62%
Dryden Township	287	301	2.03%
Faxon Township	701	712	4.80%
Gaylord City	2,305	2273	15.32%
Gibbon City	772	784	5.28%
Grafton Township	238	206	1.39%

Community	2010 Population	2020 Population	% of County 2020
Green Isle City	559	591	3.98%
Green Isle Township	524	518	3.49%
Henderson City	886	960	6.47%
Henderson Township	728	665	4.48%
Moltke Township	279	427	2.88%
Jessenland Township	444	269	1.81%
Kelso Township	292	268	1.81%
New Auburn City	456	411	2.77%
New Auburn Township	418	387	2.61%
Severance Township	253	219	1.48%
Sibley Township	255	238	1.60%
Transit Township	276	250	1.69%
Washington Lake Township	498	454	3.06%
Winthrop City	1,399	1332	8.98%
Total	15,226	14836	100.00%

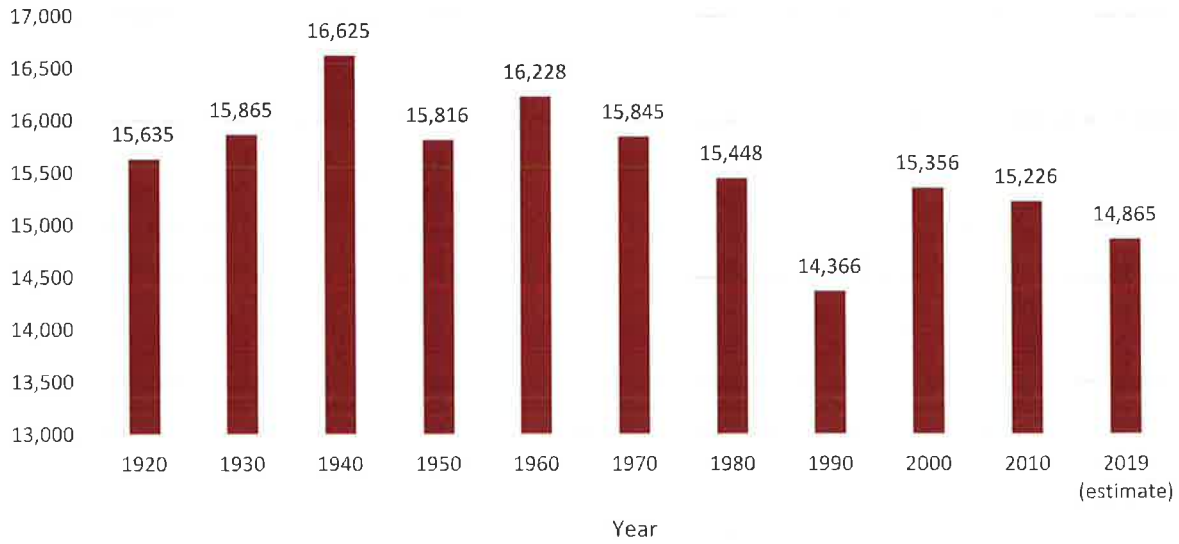
SOURCE: (U.S. CENSUS BUREAU, 2020B)

Population growth trends have an important influence on the needs and demands of a variety of services such as transportation, law enforcement and emergency response. An understanding of population trends and location of population concentrations is important for making projections regarding potential impacts in the event of a disaster.

The county's population saw a sudden 7% decrease from 1980 to 1990, followed by a sudden 6.9% increase from 1990 to 2000. Sibley County's population decreased by 2.4% from the 2000 census to the estimated population in 2019 (U.S. Census Bureau, 2020b). Population predictions show a downward trend, and the Minnesota State Demographic Center projects an 11.6% decline in Sibley County's population through 2050 (Minnesota State Demographic Center, 2020). Figure 3 provides an overview of the county's historic population change, and projected population is detailed in Figure 4.

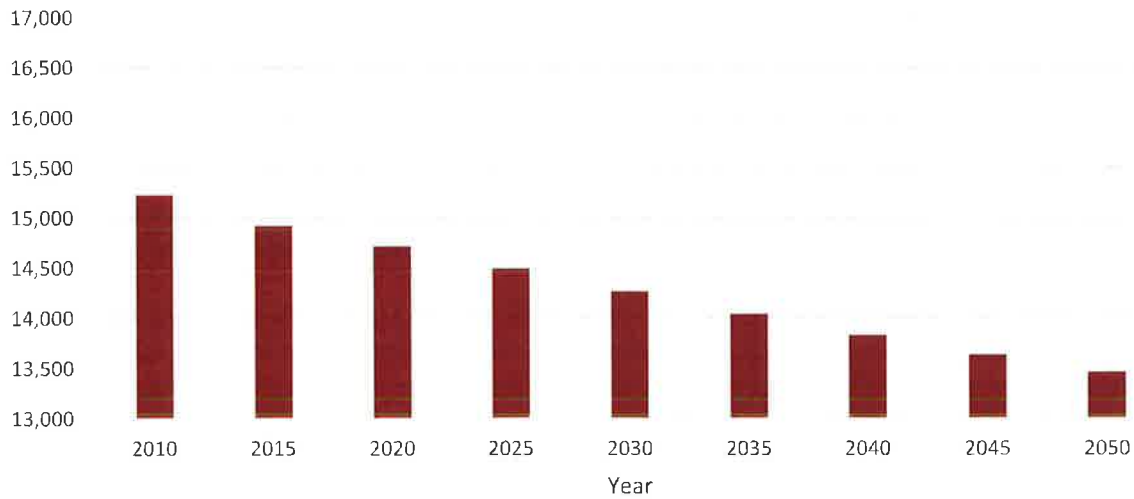
Sibley County's total population consists of 49.8% females and 50.2% males. 5.1% of the total population is aged 80 and older, and 27.8% of the total population is under 20 years old. 40–59-year-olds make up the largest age category in Sibley County, at 28.9% of the population. Figure 5 breaks down the percentage of the total population into categories of age and sex.

Figure 3. Sibley County's population change, 1920–2019



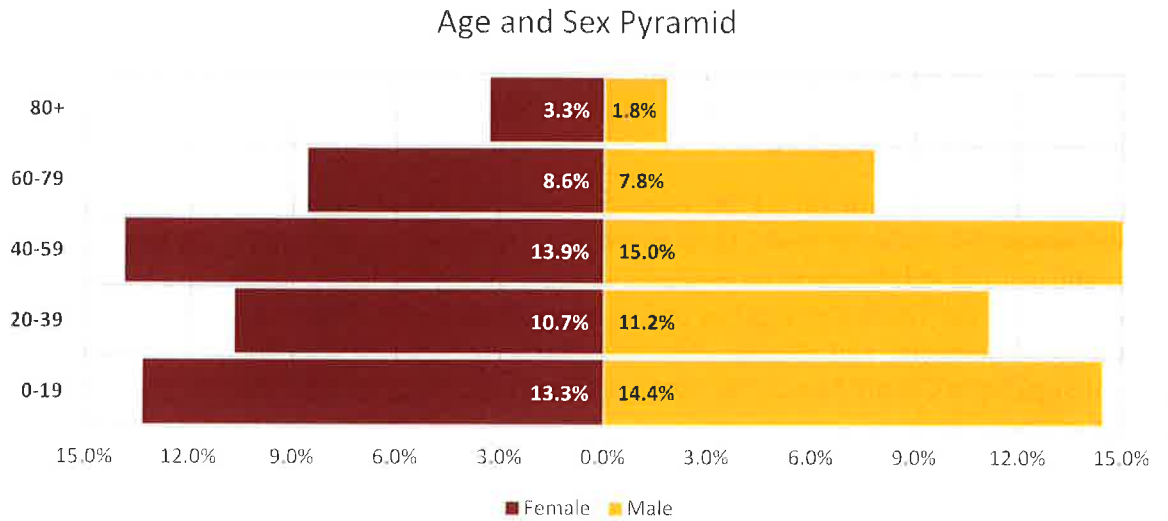
SOURCE : (U.S. CENSUS BUREAU, 2020A)

Figure 4. Sibley County's projected population change, 2010–2050



SOURCE: (MINNESOTA STATE DEMOGRAPHIC CENTER, 2020)

Figure 5. Sibley County's age (years) and sex percentage of total population



SOURCE: (U.S. CENSUS BUREAU, 2020B)

3.6 Economy

As of 2019, the Education and Health Services supersector employed (23.9%) of people in Sibley County, followed by Natural Resources and Mining (18.5%), and Trade, Transportation and Utilities (16.1%). The total number of jobs in the county increased by over 3.3% between 2009 and 2019. The 10-year change in the average annual employment of each industry supersector in Sibley County is in Table 7.

Table 7. Average annual employment by Industry Supersector, Sibley County

Industry Supersector	Average # of Employees (2009)	Average # of Employees (2019)	% Change
Natural Resources and Mining	560	789	40.89%
Construction	248	165	-33.47%
Manufacturing	696	665	-4.45%
Trade, Transportation and Utilities	726	689	-5.10%
Information (1022)	19	17	-10.53%
Financial Activities	107	85	-20.56%
Professional and Business Services	163	211	29.45%
Education and Health Services	992	1,020	2.82%
Leisure and Hospitality	180	196	8.89%
Other Services	86	103	19.77%
Public Administration	360	335	-6.94%
Total, All Industries	4,139	4,276	3.31%

SOURCE: (MN DEED, 2020)

The 2018 median household income in Sibley County was \$62,761 compared to a Minnesota average of \$70,315. The median household income in Sibley County increased by 22% from 2010 to 2018. The percent of the county's population living below the poverty level in 2016 was 7.1%, compared to a 9.6% average for the state of Minnesota (U.S. Census Bureau, 2020c).

3.7 Critical Infrastructure

Critical infrastructure systems are among the most important assets of a community. While different infrastructures accomplish different goals, their continued operations are integral to the health, safety, and economic and cultural well-being of the residents of Sibley County. Critical infrastructure is identified based on FEMA guidelines (FEMA, 2013a) as well as input from Sibley County and classified into the following groups: Emergency and Shelter Facilities, Infrastructure Systems, High Potential Loss Structures, and Significant County Assets. For the complete list of critical infrastructure in Sibley County, see Appendix I.

3.7.1 ESSENTIAL FACILITIES

Emergency and shelter facilities are vital to the health and welfare of entire populations, providing services and functions essential to communities, especially during and after a disaster. Emergency and shelter facilities include healthcare facilities, emergency services, evacuation centers/shelters, and schools (often used as evacuation centers/shelters). U-Spatial provided Sibley County with an interactive online application to verify the names and locations of all emergency and shelter facilities. The verified locations were mapped, and the resulting spatial data were provided to the county. Figure 6 shows the emergency and shelter facilities in a few representative communities with concentrated facilities.

Healthcare Facilities

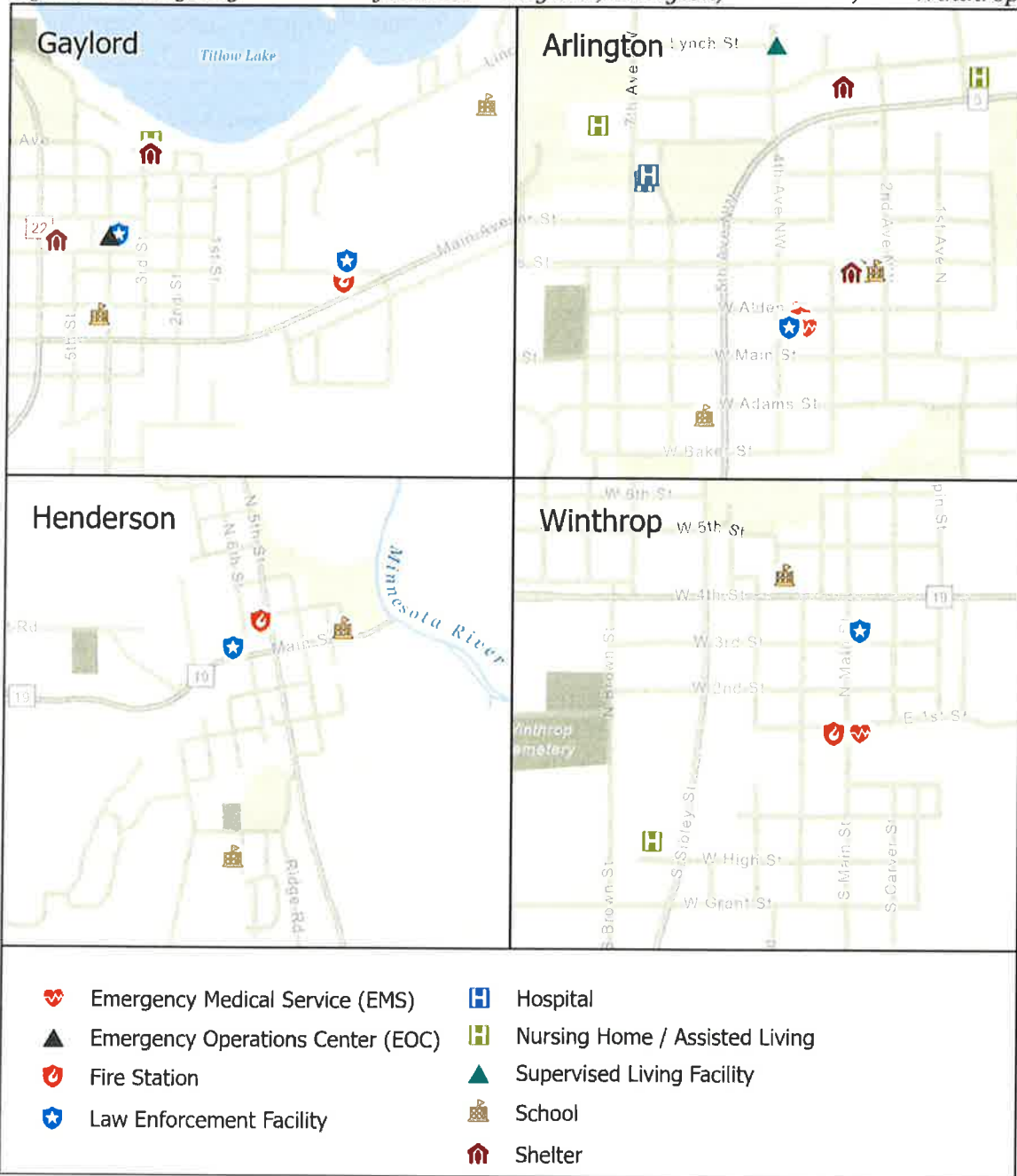
Sibley County is served by six public and private healthcare facilities. Four are located in Arlington: the Good Samaritan Society, Golden Hearts, Inc., and High Island Creek Residence, which are assisted living/long-term care facilities, and the Ridgeview Sibley Medical Center, an integrated hospital and clinic. One additional Good Samaritan Society facility is located in Winthrop. The Oak Terrace Healthcare Center, another retirement community and assisted living facility, is located in Gaylord.

Emergency Services

Law Enforcement: There are five police departments in the county. They are in Gaylord, Winthrop, Gibbon, Henderson, and Arlington. The Sibley County Sheriff's Department and Jail is also located in Gaylord. The Sheriff's Department serves the whole county, including 17 townships. The Emergency Operation Center is also located in the city of Gaylord.

Fire & Rescue Services: There are seven fire departments throughout the county. They are based out of Arlington, Green Isle, Gibbon, New Auburn, Gaylord, and Henderson. There is also a volunteer fire department in Winthrop. Three ambulance services operate as Emergency Medical Services: The Winthrop Ambulance Service, Arlington Ambulance Service, which operates out of the Arlington Fire Department, and Gaylord Ambulance Service, which is connected to the Gaylord Police Department.

Figure 6. Emergency and shelter facilities in Gaylord, Arlington, Henderson, and Winthrop



SOURCE: (HIFLD, 2021; MDH, 2021A; SIBLEY COUNTY)

Schools & Evacuation Centers/Shelters

There are eighteen schools in Sibley County. Sibley East Public Schools include a high school, middle school, and elementary school in Arlington, and serves the Arlington, Green Isle, and Gaylord communities. Arlington also has a religious school, St. Paul Lutheran School, which serves pre-kindergarten through grade 8. The Arlington Community Center is another potential shelter facility in

the city. Gaylord has the Gaylord Elementary and Junior High School, part of the Sibley East public school system. The city also has Immanuel Lutheran School. The Oak Terrace Healthcare Center, listed above, is another shelter facility.

Gibbon has three schools, all elementary schools. The St. Peters Lutheran School is a private school serving grades K-8, Starland Elementary is a public charter also serving grades K-8, and G.F.W. Elementary (serving the Gibbon-Fairfax-Winthrop communities), caters to students Pre-K through 5th grade. The G.F.W. High School is located in Winthrop, and the district office is in Gibbon.

Henderson has four schools. Hilltop Elementary, part of the Le Sueur-Henderson School District, Minnesota New Country School, a charter school that was expanded from grades 6-12 to K-12 in 2013, and Altona Christian School, a private K-12 school. Green Isle Community School is a public charter school for grades K-6 located in Green Isle. Additionally, the Holy Family Academy is a K-12 private Catholic school in Belle Plaine.

3.7.2 INFRASTRUCTURE SYSTEMS

Infrastructure systems include the transportation systems and utility systems fundamental to the functioning of communities. These systems allow for emergency facilities to operate and connect to residents; they are the lifelines for communities.

Transportation Systems

The infrastructure of transportation systems facilitates the movement of individuals, goods, and services. The county transportation system is composed of roads, highways, an airport, public transit, railroads and trails. The system is designed to serve all residents, businesses, industries and tourists.

Sibley County maintains about 1,129 miles of road. Maintenance activities include placing gravel, snow and ice control, signing, mowing the roadside, patching pavement, sealing cracks, and controlling weeds. Motor patrol operators, truck drivers, heavy equipment operators, and mechanics comprise the staff responsible for these functions. Construction staff is responsible for implementing projects such as earthwork, paving, seal coats, and highway striping.

The Public Works Department is responsible for the inspection of Sibley County's 156 bridges. There are 70 county, 60 township, and 2 city bridges. There are also 24 state bridges. Public Works handles funding sources and the other local government units when maintaining or replacing a bridge.

Trailblazer Transit provides public transportation services to residents in the counties of McLeod, Scott, and Sibley.

The Minnesota Department of Transportation classifies roads into route systems according to the services a road is intended to provide. Table 8 lists the total miles of road for each route system within Sibley County.

Table 8. Road Miles by Route System

Route System Defined	Miles
County Road	94
County State Aid Highway (CSAH)	288
MN Highway	102
Municipal	65
Ramp or Connector	1
Township Road	574
US Highway	5
Total	1,129

SOURCE: (MNDOT, 2012)

Railways One railroad operated by the Minnesota Valley Regional Rail Authority in Redwood Falls, Minnesota, runs west-east through Gibbon, Winthrop, Gaylord, Arlington, and Green Isle.

Airports: One airport is located in the northeastern corner of the county, the A.R.S. Sport Strip, which is privately owned. The turf runway is 2,505 feet long, at an elevation of 950 feet.

Utility Systems

The infrastructure of utility system networks facilitates the process of providing essential utilities to consumers. A map of the major utilities systems in Sibley County is displayed in Figure 7.

Water & Sewer: Sibley County is home to eight wastewater treatment plants, four of which are active. The active plants are all classified as sewerage systems, and are located in Arlington, Gibbon, New Auburn, and Winthrop. The inactive stations are located in Henderson, Green Isle, Le Sueur, and Arlington. Of these, Green Isle and Arlington are classified as water supply plants, while Henderson and Le Sueur are sewerage systems. In 2019, the Minnesota River Valley Utilities Commission ended joint oversight of the wastewater treatment plant between the cities of Henderson and Le Sueur, in favor of the city of Le Sueur, located in Le Sueur County, taking over the operations. The city of Henderson will now pay Le Sueur for treatment of its water.

Energy: Ten electrical substations are located within Sibley along with twenty-eight major electric transmission lines. The area is served by two companies, Xcel Energy, Inc., and Great River Energy. There are three solar power plants: Gibbon Solar in Gibbon, operated by Novel Solar Three, LLC, Mud Garden Solar in Gaylord, operated by Mud Garden LLC, and Erin Garden Solar in Green Isle, operated by Erin Garden LLC.

Eight natural gas pipelines run throughout the county. One is operated by Alliance Pipeline System, another by Hutchinson Pipeline, and the remainder are operated by Northern Natural Gas Co. Additionally, the MinnCan Pipeline System, a crude oil pipeline part of Koch Pipeline, cuts across the northeastern corner of the county. The Cochin Pipeline, a hydrocarbon gas liquids (HGL) pipeline operated by Kinder Morgan, runs across the southwest corner.

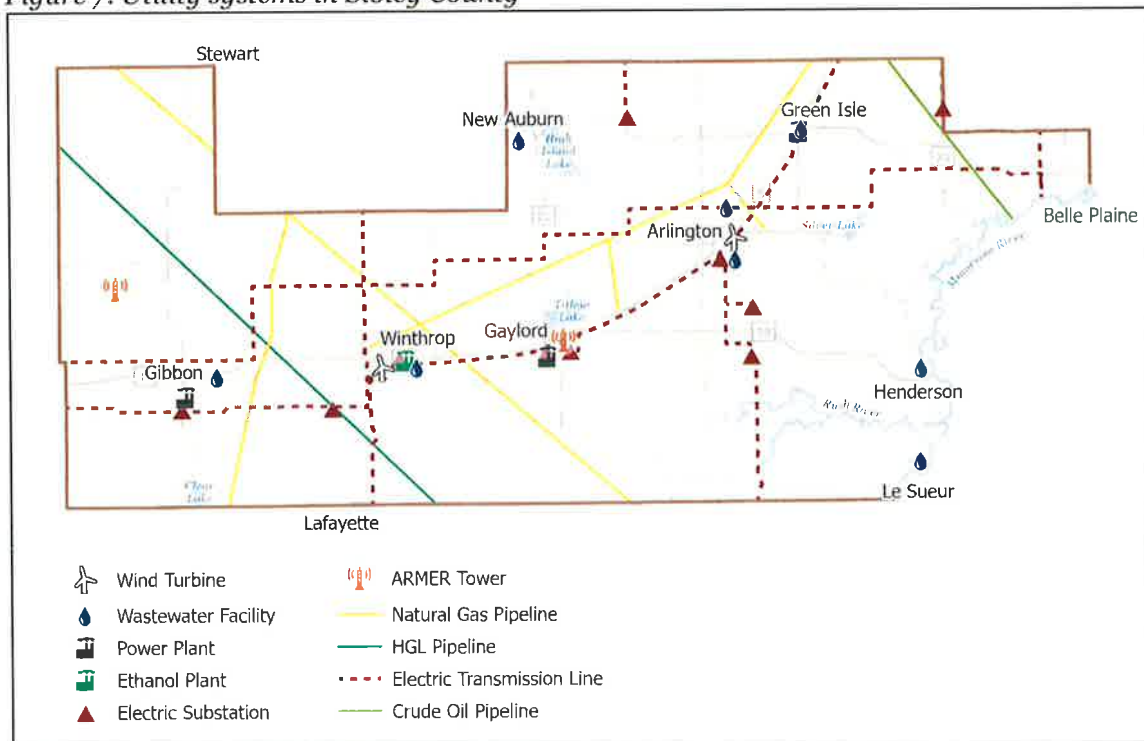
Communication: Administered in coordination with the Minnesota Statewide Radio Board, the Allied Radio Matrix for Emergency Response (ARMER) Program manages the implementation of a 700/800 megahertz (MHz) shared digital trunked radio communication system capable of servicing the radio communication needs of every public safety entity operating in Minnesota (MN DPS, 2021). There are two ARMER towers in Sibley County, in Gibbon and Gaylord.

3.7.3 HIGH POTENTIAL LOSS STRUCTURES

High potential loss structures are structures which would have a high loss or negative impact on the community if they were damaged or destroyed (FEMA, 2004b). These structures include dams, levees (see Section 3.4.4), and facilities storing hazardous materials.

A hazardous materials facility contains materials that would threaten the public if released. The inventory of these facilities in Sibley includes those required to register with the EPA due to the type and quantity of hazardous materials being stored or produced at the facility. Seven of these facilities have been identified in Sibley. Due to the sensitive nature of these data, the locations of these facilities have not been mapped in this plan.

Figure 7. Utility systems in Sibley County



SOURCE: (MN GIO, 2016; MPCA, 2018B; US EIA, 2020)

3.7.4 SIGNIFICANT COUNTY ASSETS

Significant county assets include larger employers which represent a primary economic sector of a community, buildings of government services deemed to be significant, and cultural or historic assets that are important to a community.

Employers: While every employer is an important asset to a community, the loss or disruption of certain employers, or the primary economic sector of a community, will have a large negative impact on the respective communities. Nine employers fitting this profile were identified in Sibley County, falling into the Food & Agriculture and Manufacturing sectors. Half of them are located in Gaylord, including Unidoor Corp, Control Assemblies Co, and three Michael Foods locations. Three employers are in Winthrop: Dairy Farmers of America, Heartland Corn Products, and United Farmers Cooperative. There is an additional United Farmers Cooperative in the city of Hamburg.

Government Buildings: Government buildings deemed to be significant is at the discretion of the communities, but often include government service centers, the court house, jails, and prisons. Previously mentioned government emergency services (police and fire), as well as schools, are not included in this list. There are three significant county buildings identified by the county, all located at the county seat in Gaylord: the Sibley County Courthouse, the Sibley County Service Center, and the Sibley County Sheriff's Office and Jail, previously noted above.

Cultural Resources: Cultural resources are cultural or historic assets that are unique, irreplaceable, or important to a community. Seven such assets have been identified in Sibley County. Three of these are in Henderson, the former county seat. The Sibley County Courthouse and Sheriff's Residence and Jail and the Gaylord City Park are in the city of Gaylord. The Gibbon Village Hall is in Gibbon, and the Church of St. Thomas is in Jessenland Township.

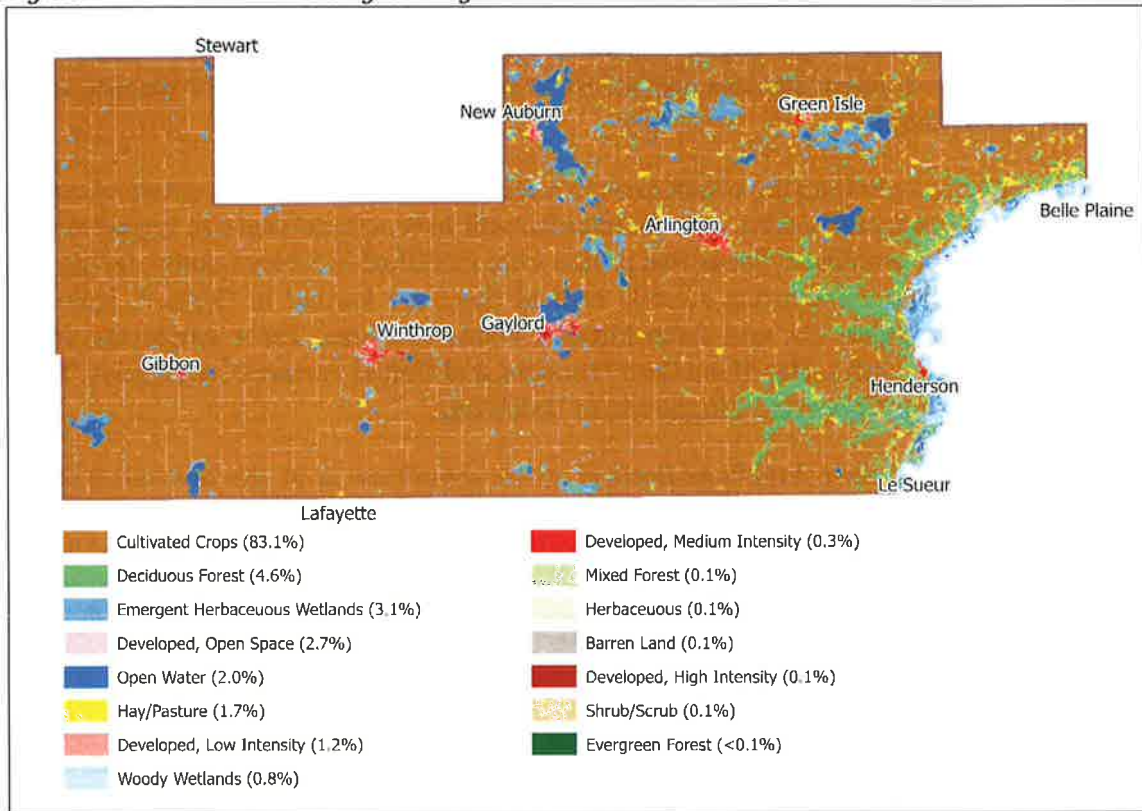
3.8 Land Use and Ownership

Sibley County is a largely agricultural county. The county is 601 square miles, 83% of which is covered by cultivated crops, followed by deciduous forest (5%), and emergent herbaceous wetlands (3%) (USGS, 2016). A map of Sibley County's land cover is displayed in Figure 8.

Nearly 85% of the land in Sibley County is cropland. The term "cropland" encompasses five components: harvested cropland, crop failure, cultivated summer fallow, cropland used only for pasture, and idle cropland (USDA ERS, 2019). Between 2012-2017 the area of total cropland in the county grew by 2.5%, from 318,627 acres in 2012 to 326,640 acres in 2017 (USDA, 2012, 2017). "Harvested cropland" are the acres of cropland that are planted and successfully harvested. Table 9 shows a breakdown of Sibley County's harvested cropland in 2017.

In addition to growing crops, Sibley County is also home to a few hundred feedlots. A 2016 inventory counted 962 active feedlots in the county. Nearly 67% of the feedlots raise cattle as the primary stock, 13% raise pigs, and 12% raise horses. An average of 3,740 animals are on each feedlot (MPCA, 2016).

Figure 8. Land cover in Sibley County



SOURCE:(USGS, 2016)

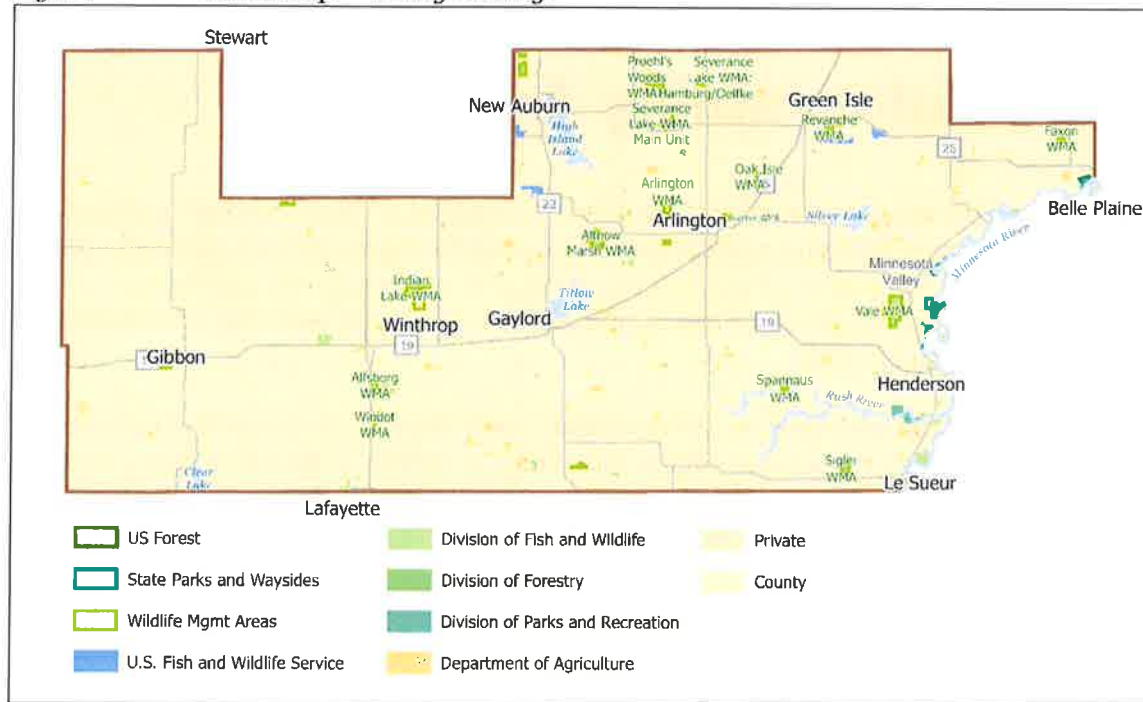
Ownership of the county is divided between seven different agencies; the majority being privately owned (98%). Land ownership is displayed in Figure 9.

Table 9. Sibley County's harvested cropland, 2017

Crop	Acres	% of Harvested Cropland
Corn (grain & silage)	165,568	52.52%
Soybeans	131,259	41.64%
Hay & Haylage	7,649	2.43%
Sugar Beets	2,953	0.94%
Wheat	1,154	0.37%
Barley	634	0.20%
Oats	569	0.18%
Other	5,444	1.73%
Total	315,230	100%

SOURCE: (USDA NASS, 2017)

Figure 9. Land ownership in Sibley County



SOURCE: (MN DNR, 2008)

Section 4 – Risk Assessment and Vulnerability Analysis

The goal of mitigation is to reduce or eliminate the future impacts of a hazard, including loss of life, property damage, disruption to local and regional economies, and the expenditure of public and private funds for recovery. Sound mitigation practices must be based on sound risk assessment. A risk assessment involves quantifying the potential loss resulting from a disaster by assessing the vulnerability of buildings, infrastructure, and people.

The risk assessments in this plan are based on widely accepted tools and databases as well as consultation with hazard mitigation planning expertise at FEMA and HSEM as well as technical guidance from the MN DNR State Climatology Office. Geographic Information System (GIS) tools are used throughout to demonstrate geographically based risk and vulnerabilities.

This assessment identifies the characteristics of natural hazard events, the severity of the risk, the likelihood of these events occurring, and the vulnerability of each jurisdiction’s population and assets.

4.1 Hazard Identification and Prioritization

The cornerstone of the risk assessment is identification of the hazards that affect jurisdictions. To facilitate the planning process, several sources were employed to ensure that the natural hazards are identified prior to assessment. Listed below are the natural hazards addressed in the 2019 Minnesota State Hazard Mitigation Plan:

Flooding	Lightning	Drought
Dam/Levee Failure	Winter Storms	Extreme Heat
Wildfires	Landslides (Erosion and	Extreme Cold
Windstorms	Mudslides)	Earthquakes
Tornadoes	Land Subsidence (Sinkholes	Coastal Erosion & Flooding
Hail	and Karst)	

4.1.1 HAZARD PRIORITIZATION

As part of the plan update process, the planning team reviewed, updated, and prioritized the hazards faced by residents of Sibley County, updated the existing mitigation actions published in the 2015 Multi-Hazard Mitigation Plan, and proposed new mitigation actions.

To engage in this process, the planning team drew on a number of data sources. First, the team examined the hazards identified in the 2015 Multi Hazard Mitigation Plan. The natural hazards that pose risk to Sibley County were discussed and adjusted to reflect the definitions of natural hazards used in the 2019 Minnesota State Hazard Mitigation Plan.

While the focus of this MHMP is on natural hazards, planning took place with the understanding that many non-natural hazards could occur as a result of natural disasters (i.e., disruption in electrical service due to downed powerlines from heavy snow, ice storms, or high wind events).

The prioritization of hazards for the Sibley County MHMP Update (Table 10) was based upon group review and discussion of the natural hazards that pose risk to the county during the MHMP Planning Team Meeting #1 on September 15, 2020. In the review of each hazard, the group was asked to consider if the risk to severe natural hazards had increased or decreased since the last plan, and if this affected their priority level to mitigate against that hazard. The group agreed that since the last plan the prioritization of windstorms should be increased slightly from moderate to moderate-high due to a noted increase in the frequency of windstorms per year. The prioritization of lightning was reduced from moderate to low, as occurrence of site damage from lightning is low. The prioritization for drought and wildfire also decreased from moderate to low based on historical data of low drought/wildfire events. The prioritization of all other natural hazards was unchanged since the last plan. Appendix F provides the discussion notes from the September 15, 2020 meeting.

Table 10. Prioritization of hazards for 2021 Sibley County MHMP Update

Natural Hazards	Hazard Priority
Blizzards	Moderate
Heavy Snow	Moderate
Ice Storms	Moderate
Windstorms	Moderate to High
Lightning	Low
Hailstorms	Moderate
Tornadoes	High
Flooding	High
Landslides	Low
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Low to Moderate
Dam Failure	Low
Wildfire	Low

4.1.2 NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION (NCEI) STORM EVENTS DATABASE

Much of the storm data used in this plan is from the NOAA National Centers for Environmental Information’s (NCEI) Storm Events Database. The NCEI receives storm data from the National Weather Service (NWS), which receives the information from various local, state, and federal sources. The Storm Events Database contains records documenting:

- the occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce;
- rare, unusual weather phenomena that generate media attention, such as snow flurries in South Florida or the San Diego coastal area; and
- other significant meteorological events, such as record maximum or minimum temperatures or precipitation that occur in connection with another event (NCEI, 2021).

Records in the Storm Events Database go back as far as January 1950; however, only tornado events were being reported from the beginning. Revisions to the type of storm events reported to the database are ongoing. As of July 16, 2018, 55 different types of storm events were being reported to the Storm Events Database (NCEI, 2021). Storm Events Database hazard categories used in this plan are listed in Table 11 below. For some hazards, other sources are used in the hazard histories to create a more comprehensive record.

A summary table of events related to each hazard type is included in the hazard profile sections that follow in Section 5. Please note, frequency statements in hazard profile sections are based on the hazards reported for the entire period of record. In some cases, events may be underreported.

The Storm Events Database is updated regularly. NCEI receives data from the NWS approximately 75 days after the end of a data month therefore, during the timeframe of compiling this plan, data more current than what is used in this report will become available (NCEI, 2021).

The economic and property loss estimates in the Storm Events Database are often preliminary in nature and may not match the final assessment of losses related to given weather events.

Table 11. National Centers for Environmental Information Event Types

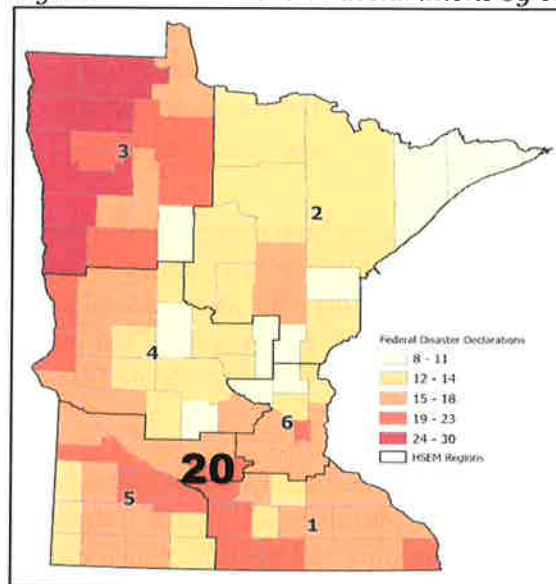
Hazard	NCEI Event Types	Period of Record
Flooding	Flood, Flash Flood, Heavy Rain	1996–present
Windstorms	Thunderstorm Wind, High Wind, Strong Wind	1955–present
Tornadoes	Tornado	1950–present
Wildfire*	Wildfire	1996–present
Hail	Hail	1955–present
Lightning	Lightning	1996–present
Winter Storms	Winter Weather, Winter Storm, Blizzard, Heavy Snow, Ice Storms, Lake Effect Snow, Sleet	1996–present
Extreme Cold	Cold, Wind Chill	1996–present
Extreme Heat	Excessive Heat, Heat	1996–present

SOURCE (NCEI, 2021)

4.1.3 FEMA- AND MINNESOTA-DECLARED DISASTERS AND ASSISTANCE

Another historical perspective is derived from FEMA-declared disasters. Sixteen major disaster and four emergency declarations in Sibley County have been made between 1957 and January 2021 (Figure 10), for a total of 20. These are listed in Table 12.

Figure 10. FEMA disaster declarations by county



SOURCE: (FEMA, 2021A)

Table 12. FEMA-declared major disasters and emergency declarations in Sibley County (1957–April 2021)

Declaration Number	Declaration Year	Incident	Incident Period
EM-3453-MN	2020	Covid-19	01/20/2020–current
DR-4531-MN	2020	Covid-19 Pandemic	01/20/2020–current
DR-4442-MN	2019	Severe Winter Storm, Straight-Line Winds, and Flooding	03/12/2019–04/28/2019
DR-4390-MN	2018	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	06/15/2018–07/12/2018
DR-4182-MN	2014	Severe Storms, Straight-Line Winds, Flooding, Landslides, and Mudslides	06/11/2014–07/11/2014
DR-4131-MN	2013	Severe Storms, Straight-Line Winds, and Flooding	06/20/2013–06/26/2013
DR-4069-MN	2012	Severe Storms and Flooding	06/14/2012–06/21/2012
DR-1982-MN	2011	Severe Storms and Flooding	03/16/2011–05/25/2011
DR-1941-MN	2011	Severe Storms and Flooding	09/22/2010–10/14/2010
DR-1900-MN	2010	Flooding	03/01/2010–04/26/2010

Declaration Number	Declaration Year	Incident	Incident Period
EM-3310-MN	2010	Flooding	03/01/2010–04/26/2010
DR-1921-MN	2010	Severe Storms, Tornadoes, and Flooding	06/17/2010–06/26/2010
EM-3242-MN	2005	Hurricane Katrina Evacuation	08/29/2005–10/01/2005
DR-1370-MN	2001	Severe Winter Storms, Flooding, and Tornadoes	03/23/2001–07/03/2001
DR-1158-MN	1997	Severe Winter Storms	01/03/1997–02/03/1997
DR-1175-MN	1997	Severe Flooding, High Winds, Severe Storms	03/21/1997–05/24/1997
DR-993-MN	1993	Severe Storms, Tornadoes & Flooding	05/06/1993–08/25/1993
EM-3013-MN	1976	Drought	06/17/1976–06/17/1976
DR-255-MN	1969	Flooding	04/18/1969–04/18/1969
DR-188-MN	1965	Flooding	04/11/1965–04/11/1965

SOURCE: (FEMA, 2021A)

Minnesota Statutes Chapter 12A established a framework for state agencies to help communities recover from disaster. In 2014, Governor Mark Dayton signed legislation establishing the state’s Disaster Assistance Contingency Account to assist local communities after a natural disaster when federal aid is not available. Damage required to declare a disaster is half the threshold of the federal/FEMA public assistance (only) program threshold (MN HSEM, 2019). Sibley County was included in one State Disaster Declarations (Table 13).

The Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), and Flood Mitigation Assistance (FMA) Program are FEMA-administered hazard mitigation assistance programs which provide funding for eligible mitigation planning and projects which reduce disaster losses and protect life and property from future disaster damages (FEMA, 2021b). Table 14 lists the projects in the county funded by a hazard mitigation assistance program.

Table 13. State disaster declarations in Sibley County, 2014–2021

DR	Date Declared	Incident Period	Incident Type	Eligible Counties & Tribes
SD-050 (open)	12/7/2020	7/25–27/2020	Heavy rains, flooding, and slope failures	Nicollet, Renville, Sibley

SOURCE: (MN HSEM, 2021)

Table 14. Historical Hazard Mitigation Funding awarded in Sibley County

DR/project #	Sub-Grantee	Project Type	Federal Share (%75)
4069.01	Sibley County	plan update	\$30,000.00
4290.6	Sibley County	acquisition	\$75,000.00

SOURCE: (MN HSEM, 2021)

4.2 Jurisdictional Change in Risk or Vulnerability Assessment

Jurisdictions in Sibley County have varying vulnerabilities to and concerns about impacts to their communities. Interviews with jurisdictional representatives in addition to the Local Mitigation Survey

resulted in some specific concerns (see Appendix C: Local Mitigation Surveys). Participants were asked to provide feedback on how their community's vulnerability to natural hazards had either increased (due to changes such as development) or decreased (due to local mitigation efforts) over the past 5 years.

At the local jurisdictional level, several communities did note an increase in development over the last five years as a factor for an increase in vulnerability to severe weather or disaster events.

4.2.1 JURISDICTIONAL RESPONSES

As part of the Local Mitigation Survey form, Sibley County Emergency Management and each city jurisdiction were asked to provide a vulnerability assessment that described what structures, systems, populations, or other community assets were susceptible to damage and loss from specific hazard events. Following are examples of common responses related to noted local vulnerabilities (as preserved in Appendix C: Part A, Question 3) for each jurisdiction. This information was used to help tie local vulnerability back to the exposure of people, buildings, infrastructure, and the environment to the natural hazards listed in Table 10 and to assist local governments in development of related local mitigation actions to reduce risk.

Sibley County

Flooding: The city of Henderson and properties along Hwy. 93 and CR 6 are vulnerable to flooding.

Tornadoes: The city of New Auburn has a trailer park and apartments with no designated storm shelter. County Parks do not have storm shelters.

Ice Storms, Blizzards: Power poles and power lines may come down from ice storms & blizzards causing extended power outages for the county.

Landslides: The city of Henderson has a portion of town that may experience a landslide. A disaster event from a landslide occurred in Henderson in 2014.

Extreme Heat: Citizens throughout the county would have issues with cooling in the event of power outages.

Extreme Cold: Citizens throughout the county would have issues with heat in the event of power outages.

City of Arlington

Flooding: On the west side of the city the sewer pipes incur an influx of storm water during big rains that overwhelm the system and backs up into people's homes. Also, the streets continue to flood in that general area as well. The storm collection pond northwest of town is not built to handle bigger rains. Problems include inflow, holding, and outflow of storm water as the pipes are not big enough, nor is the pond dug deep enough, and an abutting plowed field uses the drainage on the outflow side of the pond, using up valuable flowage space in an undersized pipe. The west/northwest side of town in general does not have the drainage capacity to handle bigger

rains that have been occurring. There are also low spots in town that were developed in previous slough areas that floods quickly. We also have a senior care facility in a very low-lying area that experiences flooding and encroaching water to the facility during big rains.

Wind/Ice Storms/Blizzards: The city has an abundance of large, old trees on boulevards that could be vulnerable to severe wind, ice, and heavy snow conditions. These trees could pose a hazard to adjacent structures and homes.

Tornado, Straight-line Winds: The city has a very open west end of town where there are apartment complexes that house families and elderly people. One structure is a multi-level apartment style housing and the other is ground level duplex. Also, in the area west of town are newer home developments. These areas are particularly exposed to high winds and tornados, since strong storms during the warm months typically approach from the west. The city is also vulnerable to power outages during wind events or other storms since there are many spots in town where trees are growing into power lines. A lot of these are on resident property, some are in alleyways.

City of Gaylord

Flooding: During heavy rainstorms some of our city streets are prone to flooding as well as some basements in homes.

Ice Storms, Blizzards: We have power lines and power poles that have failed or may fail due to heavy snow and ice storms.

Windstorms, Tornadoes: We have one mobile home park without a storm shelter where residents are vulnerable to high wind events. We also have residents that do not have basements.

Extreme Cold: We have seniors & children are vulnerable to extreme cold, especially if the power goes down during storm events. We have an elementary school and a large nursing home.

City of Gibbon

Flooding: Our infrastructure is not capable of handling excessive amounts of rain in a short period of time. This will cause back up to residential properties

Blizzards: We have powerlines and power poles that may fail due to heavy snow and ice storms

Windstorms, Tornadoes: We have a campground located south of Gibbon that has no warning siren and no storm shelter for campers.

Extreme Cold: If we would lose power our main priority would be to ensure children and vulnerable adults are cared for.

City of Green Isle

Ice Storms, Blizzards: We have power lines and power poles that could fail due to heavy snow and ice storms.

Windstorms, Tornadoes: New residential development being constructed is being built slab on grade. These homeowners do not have a basement to retreat to in case of extreme wind storms or tornadoes.

City of Henderson

Flooding: Pump stations, ditches, roads, debris, utilities, sanitary sewer, traffic access, etc. have been pushed to capacity or over capacity during past floods.

Landslide: Heavy rain event 2014 no access from the west-no action taken.

Excess Debris: Heavy rainfall has deposited excess debris in ponds, ponding area, and ditches.

City of Le Sueur

Flooding: We have several areas in town that are subject to frequent spring flooding.

Windstorm, Tornadoes: We have 1 mobile home park without a storm shelter.

Hail: We had many homes damaged from a large hailstorm in 2019.

City of New Auburn

Flooding: Our city sewer lift station is vulnerable to failure during flood events if the power goes down or the lift station is flooded.

Ice Storms, Blizzards: We have power lines that may fail due to heavy snow and ice storms.

Windstorms and Tornadoes: We have a mobile home park (Divine Acres) without a storm shelter where residents are vulnerable to high wind events.

Extreme Cold: We have seniors & children are vulnerable to extreme cold especially if the power goes down during storm events.

City of Winthrop

Flooding: Our bypass lift station is susceptible to being overwhelmed during high rain events.

Windstorms, Tornadoes: We have 1 mobile home park and a municipal campground without storm shelters.

Extreme Cold: We have seniors & children are vulnerable to extreme cold, especially if the power goes down during storm events.

4.2.2 FUTURE DEVELOPMENT

Because Sibley County is vulnerable to a variety of natural hazards, the county government—in partnership with the state government—must make a commitment to prepare for the management of these events. Sibley County is committed to ensuring that county elected and appointed officials become informed leaders regarding community hazards so that they are better prepared to set and direct policies for emergency management and county response.

As part of the vulnerability assessment conducted for the Sibley County MHMP update, jurisdictions were asked to describe if there were any factors related to population growth, zoning, or development they felt have increased their community's vulnerability to future severe weather or disaster events (see Section 4.1.2). Following is a compilation of common responses as noted in Appendix C: Part A, Question 5.

City of Gaylord

Over the past few years, the city has had a few new development projects where new streets were created, and new homes are being built. The city also added a brand-new apartment complex and a brand-new elementary school. All of this would increase the cost of damage due to a tornado, wind or hail. With an increase in population and construction of more homes and commercial properties, we have also witnessed more storm water discharging to our stormwater system and natural waterways. We have a large nursing home and assisted living facility, where there is a large concentration of senior residents in one location that will need assistance during a disaster event.

City of Green Isle

The city of Green Isle has been experiencing a great deal of growth with housing developments on all four corners of the city. In the event of a severe storm this may result in higher costs for damages that could occur.

City of Le Sueur

Over 50% of the new residential homes built in the past 3 years have been slab on grade foundations with no basements leaving residents vulnerable in the event of a tornado or other severe storms.

In the development of local mitigation actions, all jurisdictions were encouraged to consider hazard mitigation strategies that would reduce risk in relation to future development, such as the update of local comprehensive plans, enforcement of ordinances, and incorporation of infrastructure improvements to reduce local vulnerabilities (see Appendix J).

The Sibley County emergency management director will work to keep the jurisdictions covered by the MHMP engaged and informed during the plan's cycle. By keeping jurisdictional leaders involved in the monitoring, evaluation, and update of the MHMP, they will keep their local governments aware of the hazards that face their communities and how to mitigate those hazards through planning and project

implementation. Section 6 of this plan further outlines the process by which Sibley County will address the maintenance of this plan, including monitoring, evaluation, and update of the plan, as well as implementation and continued public involvement.

4.3 Shared Vulnerabilities for all Hazards

Vulnerability is the susceptibility to physical injury, harm, damage, or economic loss (FEMA, 2006). While a community’s vulnerability may vary by hazard, certain population groups and structures are vulnerable to multiple hazard types. This section highlights the population groups and structures which may not be as resilient to natural hazards or deserve special attention.

4.3.1 POPULATION VULNERABILITY

The degree to which a person is vulnerable to the impacts of a hazard depends on how well they can react before, during, and after a hazardous event. The Centers for Disease Control and Prevention (CDC) Agency for Toxic Substances & Disease Registry (ATSDR) defines social vulnerability as “...the resilience of communities when confronted by external stresses on human health, stresses such as natural or human-caused disasters, or disease outbreaks” (ATSDR, 2020). Exacerbating these stressors are the increasing number of extreme weather events attributed to Minnesota’s changing climate (MPCA, 2018c).

The ATSDR created the CDC Social Vulnerability Index (SVI) to help identify vulnerable communities who may need support in preparing for hazardous or recovering from disaster. The CDC SVI is created at the census tract level using American Community Survey (ACS) five-year data. Table 15 displays how the ACS data is organized into 15 social variables, which are further grouped into four themes (ATSDR, 2020).

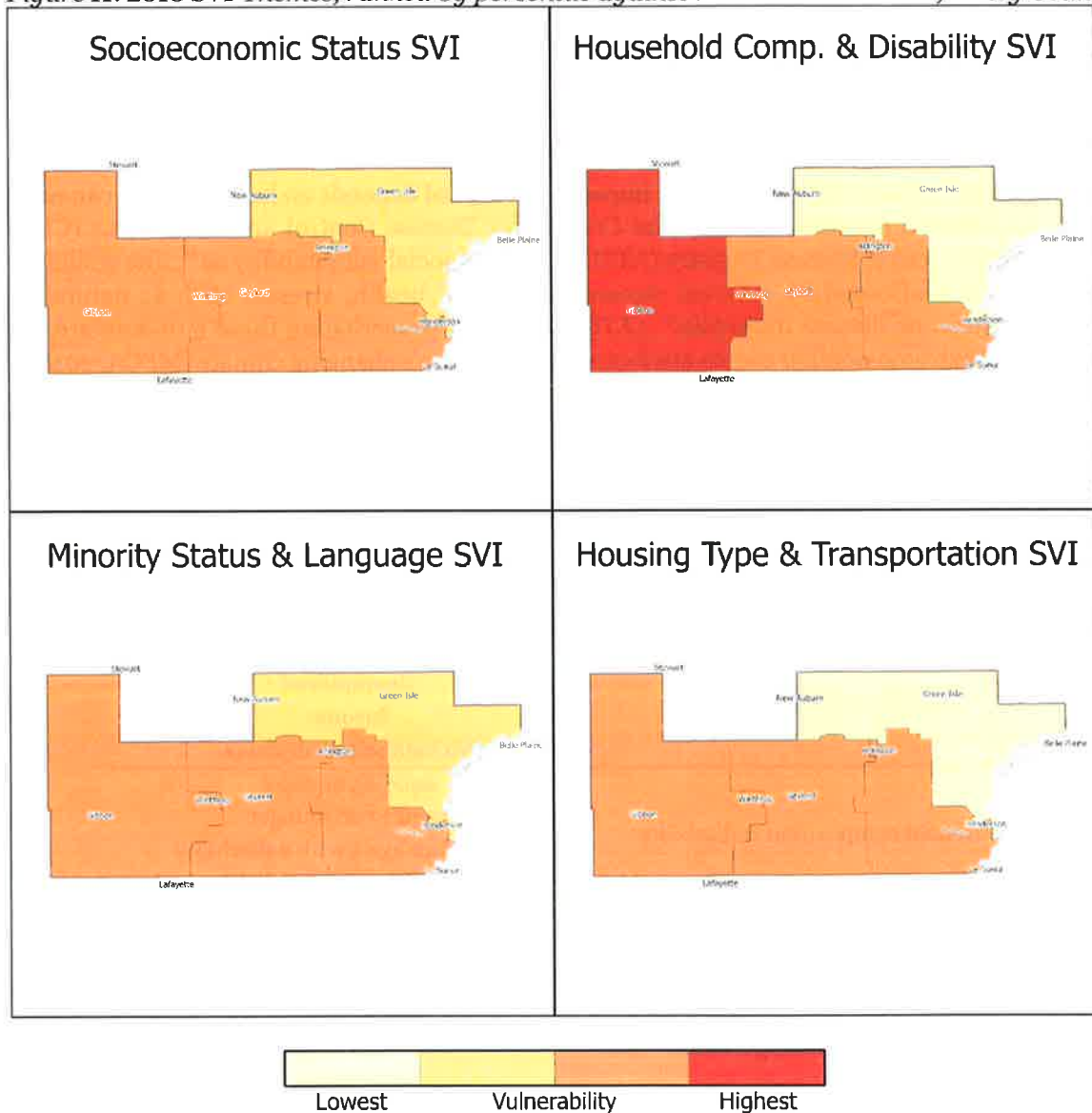
Table 15. Social Vulnerability Index (SVI) Variables

Overall vulnerability	Socioeconomic status	Below poverty
		Unemployed
		Income
	Household composition & disability	No high school diploma
		Aged 65 or older
		Aged 17 or younger
		Older than age 5 with a disability
	Minority status & language	Single-parent households
		Minority
	Housing type & transportation	Speaks English “less than well”
		Multi-unit structures
		Mobile homes
		Crowding
		No vehicle
		Group quarters

SOURCE: (ATSDR, 2020)

Census tracts within Minnesota were ranked and given a percentile value from 0 to 1, with higher values indicating greater vulnerability compared to other census tracts in the state. Theme-specific percentile rankings were generated by summing the percentiles of the variables comprising each theme and ordering the summed percentiles. For more information about the SVI methodology, visit <https://svi.cdc.gov>. A map of each SVI theme for Sibley County is displayed in Figure 11.

Figure 11. 2018 SVI Themes, ranked by percentile against all MN census tracts, Sibley County



SOURCE: (ATSDR, 2020)

4.3.2 STRUCTURE VULNERABILITY

Sibley County-specific building data was sourced from the county tax databases and parcel polygon data. The total estimated building exposure for the county is shown in Table 16.

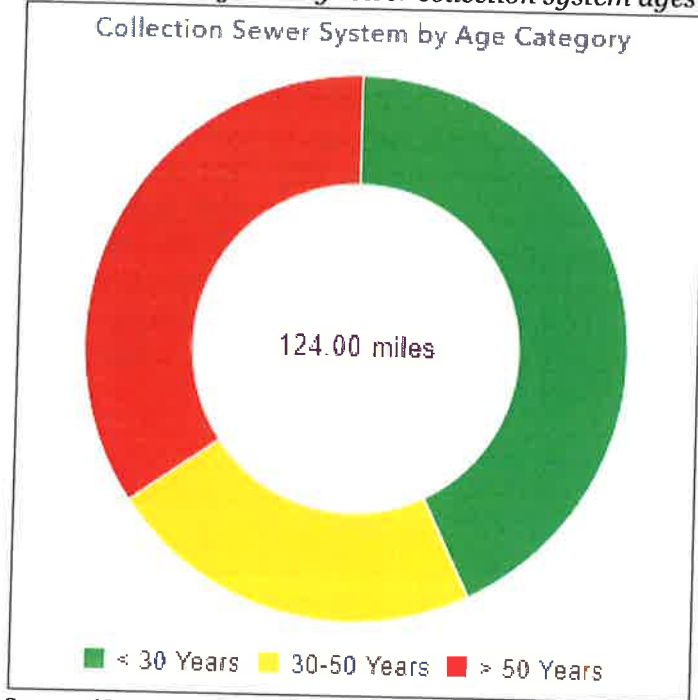
Table 16. Sibley County Total Building Exposure

General Occupancy	County Total Buildings	County Building and Contents Value
Residential	8,412	\$944,851,428
Commercial	541	\$88,758,120
Other	8,234	\$746,772,820
Totals	17,187	\$1,780,382,368

SOURCE: SIBLEY COUNTY

Sibley County’s infrastructure systems are outlined in Section 3.7. Estimates of county infrastructure economic exposure were not available. Because infrastructure protects public health and provides vital services to residents and Minnesota’s infrastructure is aging, the State Auditor’s office hosts an online infrastructure stress visualization tool to assist with planning and to provide transparency about the condition of water and wastewater infrastructure systems in the state. This tool indicates that 35% of the 124 miles of sewer collection system in the county are over 50 years old. 43% of the collection system is less than 30 years old (OSA, 2020). A chart of this age distribution is located in Figure 12.

Figure 12. Sibley County sewer collection system ages



SOURCE: (OSA, 2020)

Water and wastewater utilities provide critical services to the community that need to remain in operation for as long as possible and return to operation quickly following a severe storm situation. Undersized sewer systems can experience capacity issues following heavy rain events, resulting in overflows containing stormwater as well as untreated human and industrial waste, toxic substances, debris, and other pollutants.

Mobile homes, and therefore the people living in mobile homes, are particularly vulnerable to natural hazards. Evidence show that mobile home parks are disproportionately located in more hazard-prone regions, often undesirable or marginal lands like floodplains, and that mobile homes are particularly vulnerable to high-wind events (Rumbach et al., 2020). While Minnesota law requires most mobile home parks to have storm shelters, many do not (Sepic, 2017). Given the vulnerability of mobile home residents it is important to have a general understanding of where mobile homes are located. Licensed mobile home park locations in Sibley County are identified in Table 17.

Table 17. Mobile home park locations

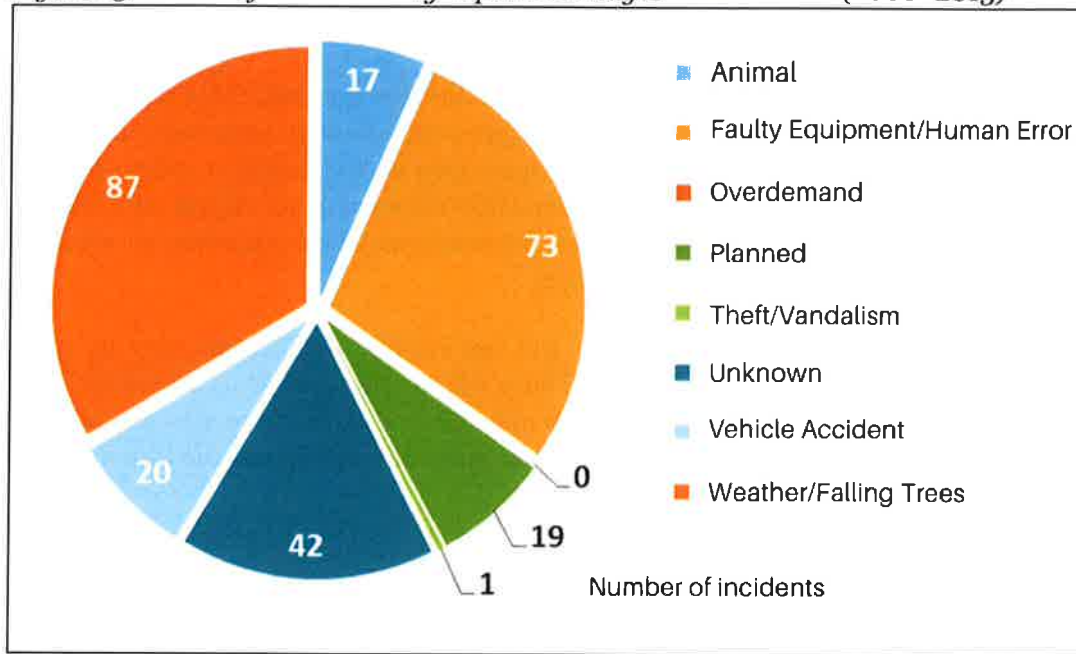
Name	Address	City
Seneca Foods	300 3rd Avenue SW	Arlington
Valencia Estates	416 E Adams Street	Arlington
Gaylord Mobile Home Park	227 Drew Ave SE	Madelia
Divine Son Park	9131 9th Avenue	New Auburn
Bussler Trailer Court	1001 North Carver	Winthrop

SOURCE: MINNESOTA DEPARTMENT OF HEALTH

4.3.3 ELECTRIC UTILITIES AND OUTAGES

Loss of power is often the result of a natural hazard. According to the U.S. Department of Energy (2016), the leading cause of electric outages in Minnesota from 2008 through 2013 was severe weather/falling trees (see Figure 13), affecting nearly half a million Minnesotans annually. While the power grid is vulnerable to weather-induced power outages, certain communities are more vulnerable to prolonged outages, which are dependent on a few factors, including the type of severe weather event (the grid being the most vulnerable to high wind events); the transmission and distribution infrastructure (overhead infrastructure being the most exposed and therefore susceptible to failure); and the density of the community (a greater number of customers affected by power outage in rural areas than in urban areas) (Mukherjee et al., 2018).

Figure 13. Causes of electric utility-reported outages in Minnesota (2008–2013)



SOURCE: (US DOE, 2016)

Because of the significance of physical and economic disruption power outages can cause, HSEM prepared a Rural Electric Annex to the MN State All Hazard Mitigation Plan to make rural electric cooperatives eligible for FEMA’s Hazard Mitigation Assistance (HMA) Program. Thirty-five percent of Minnesota’s population, and 85% of Minnesota’s territory, is covered by electrical distribution cooperatives. Flooding, windstorms, tornado, and winter storms are the greatest risks to electric utilities.

The damage to rural electric cooperative infrastructure has often been how Minnesota reaches economic damage thresholds for federal disaster declaration (MN HSEM, 2014). Rural electric cooperatives are vulnerable and could very well be becoming more vulnerable without mitigation against future damages.

In a survey to Minnesota electric cooperatives, 59% of respondents indicated that flooding has adversely affected or damaged critical infrastructure in their service area. Debris may damage the infrastructure immediately or decrease the life of the utility poles, which may be more easily damage in a subsequent event. Eighty-three percent of respondents indicated that windstorms have a high potential to impact electrical infrastructure, and nearly all (94%) cooperatives surveyed indicated that they have been affected or damaged by a tornado in the past. The most vulnerable electrical structures to wind events are overhead utility lines and the poles (MN HSEM, 2014).

Winter storms are another very common risk to electric utilities and pose additional challenges that put crews and equipment in danger. Difficult winter driving conditions put crews on icy or wind-drifted and

snowy roads. And in the case of ice storms and extreme cold winter temps, crews are subject to harsh conditions when repairing utility lines.

Power outages can also make vulnerable populations more vulnerable. Outages may force the closure of businesses, schools, and government offices. State and local governments may experience economic challenges related to large-scale power outages when they must open shelter facilities and to care for people displaced from their homes. Public agencies are frequently responsible for debris removal and clean-up in the event of a storm or tornado. Police and fire personnel may be responsible for securing downed power lines if they are dangerous to nearby residents.

People recovering from illnesses, the elderly, children, and low-income populations may be more vulnerable to the impacts of power outages than others. Those who are dependent on power for their health care needs become immediately at risk. Homeowners may see food spoiled, move to a temporary shelter, experience flooding inside of their homes, or have their pipes burst all due to the lack of power (MN HSEM, 2014).

Section 5 – Hazard Profiles

As part of the risk assessment, each natural hazard that poses risk to the county was independently reviewed for its past hazard history, relationship to future trends, and jurisdictional vulnerability to future events. A capabilities assessment was also conducted by the county to review the plans and programs that are in place or that are lacking (program gaps or deficiencies) for the implementation of mitigation efforts, as related to each natural hazard. An assessment was also conducted for local jurisdictions to identify the plans, policies, programs, staff, and funding they have in place in order to incorporate mitigation into other planning mechanisms (see Section 7.1 and Appendix C).

Hazards that were deemed by Sibley County to be of moderate to high risk are addressed in the following hazard profiles. Hazards that were determined to be of low risk or without substantive mitigation actions to address them are not required to be included (see Section 4.1.1).

5.1 Flooding

Flooding is the most significant and costly natural hazard in Minnesota. The type, magnitude, and severity of flooding are functions of the amount and distribution of precipitation over a given area, the rate at which precipitation infiltrates the ground, the geometry and hydrology of the catchment, and flow dynamics and conditions in and along the river channel.

Flash floods generally occur in the upper parts of drainage basins and are typically characterized by periods of intense rainfall over a short duration. These floods arise with very little warning and often result in locally intense damage, and sometimes loss of life, due to the high energy of the flowing water. Flood waters can snap trees, topple buildings, and easily move large boulders or other structures. Six inches of rushing water can upend a person; another 18 inches might carry off a car. Generally, flash floods cause damage over relatively localized areas, but they can be quite severe. Flash floods in urban areas involve the overflow of storm drain systems and can be the result of inadequate drainage combined with heavy rainfall or rapid snowmelt. Flash floods can occur at any time of the year in Minnesota, but they are most common in the spring and summer.

Riverine floods refer to floods on large rivers at locations with large upstream catchments. Riverine floods are typically associated with precipitation events that are of relatively long duration and occur over large areas. Flooding on small tributary streams may be limited, but the contribution of increased runoff may result in a large flood downstream. The lag time between precipitation and the flood peak is much longer for riverine floods than for flash floods, generally providing ample warning for people to move to safe locations and, to some extent, secure some property against damage.

During the past several decades, agencies have used the “100-year floodplain” as the design standard for projects funded by the federal government. However, today floods of that magnitude are occurring far more often than once per century (Natural Resources Defence Council, 2015). In recognition of increasing

risks, in January of 2015 the President issued an executive order that updates flood protection standards that guide federally funded projects in or near floodplains or along coastlines. These new standards require federally-funded projects to either build two feet above the 100-year flood elevation for standard projects and three feet above for critical buildings like hospitals and evacuation centers; or build to the 500-year flood elevation (The White House, 2015).

Please note, the term “100-year floodplain” has largely been discontinued in favor of “1-percent annual chance floodplain.”

5.1.1 HISTORY OF FLOODING

Minnesota experienced the wettest year on record in 2019, when heavy precipitation between February and May contributed to flooding throughout the state. Sibley County was included in DR-4442 for extensive flooding in April 2019 (FEMA, 2021a). In September 2019, over half the state received at least two times the normal amount of precipitation. The average precipitation for the year statewide was 35.51 inches, with many stations of over 50 years of observations breaking their own precipitation records (MN DNR, 2019e). Sibley County had 40.59 inches of rain in 2019. This total was second only to precipitation in 1993, when the county received 40.62 inches of rain (MN DNR, 2020a).

Sibley County has experienced many floods and flash floods, some resulting in severe property damage.

Table 18 lists all of Sibley County’s historical flood events from 2014–2019 as recorded by the NCEI. Three deaths have been reported as a result of flooding, along with one injury. The cumulative property damage estimate is greater than \$206 million dollars (CEMHS, 2019).

Table 18. Flood events in Sibley County, January 2015–August 2021

Date	Event Type	Description
7/25/2020	Flash Flood	The state climate office categorized the heavy rainfall event in south central Minnesota as a mega-rain. Their criteria for a mega-rain is six inches of rain or more over an area of roughly 1000 square miles. Numerous roads had water flowing over them, some up to one foot high. This occurred across southern Sibley County, mainly south of Highway 19, south of the Nicollet County line.
6/29/2020	Flash Flood	The excessive rainfall caused numerous roads to flood between Gibbon, Winthrop, and Gaylord. Flood waters came out of the middle branch of the Rush River and over the golf course in Winthrop. Even as the flood waters receded, several roads were closed or partially reopened.
3/17/2019	Flood	Numerous roads were closed for several days due to snow melt, and the flood waters that developed from it. Rapid runoff led to impassable roads, especially on county roads along streams and creeks.

Date	Event Type	Description
6/18/2014	Flood	This flood caused mudslides to enter some residences along the Minnesota River Valley. The City of Henderson was inundated with flood waters with businesses and local residence sandbagging. Scenic Highway 6 along the Minnesota River near Faxon Township washed out due to the swollen river and heavy rainfall. There were also numerous county and secondary roads closed, along and near the Minnesota River.
6/1/2014	Flash Flood	Several rounds of strong thunderstorms moved across southern Minnesota, producing torrential rainfall with rates as high as three inches per hour. County officials closed portions of County Road 6 and Crahan Lane near Belle Plaine due to flood waters.

SOURCE: (NCEI, 2021)

The USGS provides information from gauge locations at points along various rivers across the United States. There is one active USGS gauging stations located in Sibley County according to the National Water Information System. Table 19 shows data on its highest-recorded annual peaks (gauge heights). Two discontinued gauge stations on Rush River and one on Buffalo Creek are not included. If the two highest peaks for the last five years are not in the top five peaks on record, they are included with their overall risk indicated in parentheses (USGS, 2021b).

Table 19. Historical peak streamflow data (in feet) for USGS gauging stations

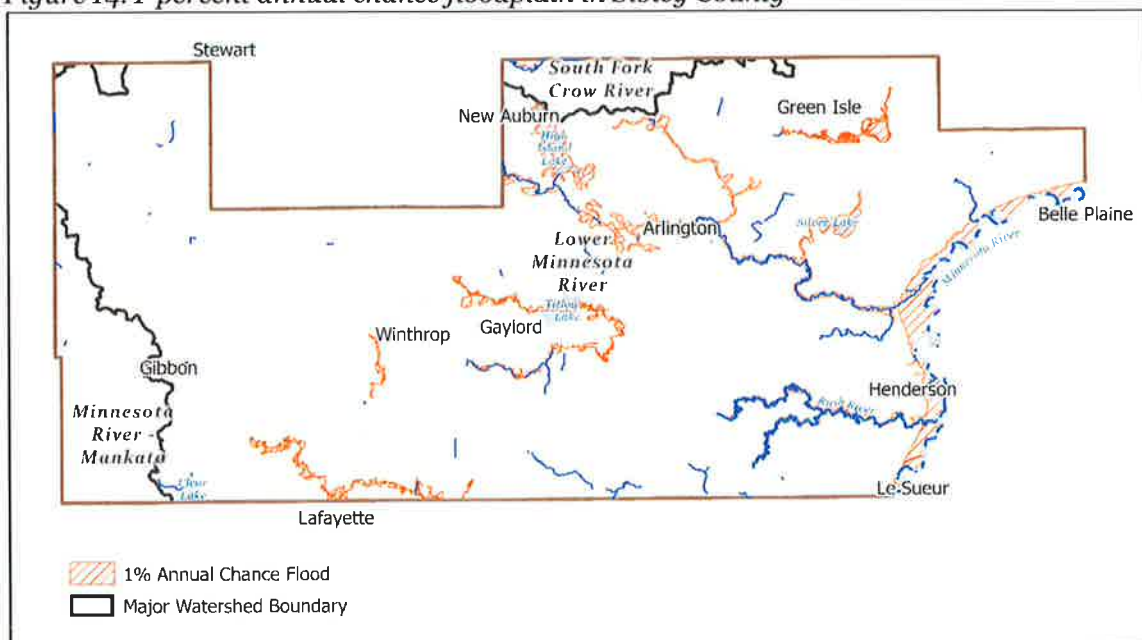
USGS 05327000 High Island Creek near Henderson Sibley, MN 1974-2020		
(1)	Jul. 05, 2019	10.30
(2)	Jun. 16, 2018	9.77
(3)	Jul. 15, 2011	9.74
(4)	Jun. 17, 1993	9.72
(5)	Jun. 11, 2004	9.50

SOURCE: (USGS, 2021B)

5.1.2 PROBABILITY OF OCCURRENCE

A potential risk and economic loss analysis for a 1% annual chance flood was performed using a FEMA tool, Hazus for ArcGIS. Depth grids were developed for the portion of the county where Q3 flood boundaries exist using Hazus EQL analyses. The remainder of the county was modeled using Hazus H&H analysis. The resulting Hazus 1% annual chance floodplain output is shown in Figure 14.

Figure 14. 1-percent annual chance floodplain in Sibley County



SOURCE: (MN DNR, 2021A)

5.1.3 CLIMATE CHANGE PROJECTIONS

As Minnesota’s climate changes, the quantity and character of precipitation is changing. Average precipitation has increased in the Midwest since 1900, with more increases in recent years. According to the Minnesota DNR State Climatology Office “Since 2000, Minnesota has seen a significant uptick in devastating, large-area extreme rainstorms as well. Rains that historically would have been in the 98th percentile annually (the largest 2%) have become more common. Climate projections indicate these big rains will continue increasing into the future.”

The Midwest has seen a 45% increase in very heavy precipitation (defined as the heaviest 1% of all daily events) from 1958 to 2011 (*National Climate Assessment Development Advisory Committee, 2013*). This precipitation change has led to amplified magnitudes of flooding. Increased precipitation may also show seasonal changes, trending toward wetter springs and drier summers and falls. An example of a recent year with this character was 2012, when many MN counties were eligible for federal disaster assistance for drought, while others were eligible for flooding, and 7 were eligible for both in the same year (Seeley, 2015). In 2007, 24 Minnesota counties received drought designation, while 7 counties were declared flood disasters. In 2012, 55 Minnesota counties received federal drought designation at the same time 11 counties declared flood emergencies. In addition, the yearly frequency of the largest storms—those with 3 inches or more of rainfall in a single day—has more than doubled in just over 50 years. In the past decade, such dramatic rains have increased by more than 7% (MN EQB, 2014).

Southeastern Minnesota has experienced three 1000-year floods in the past decade: in September 2004, August 2007, and September 2010 (Meador, 2013). The 2004 flood occurred when parts of south-central Minnesota received over 8 inches of precipitation. Faribault and Freeborn counties received over 10 inches in 36 hours. The deluge led to numerous reports of stream flooding, urban flooding, mudslides, and road closures (MN DNR, 2004). During the 2007 event, 15.10 inches fell in 24 hours in Houston County, the largest 24-hour rainfall total ever recorded by an official National Weather Service reporting location. The previous Minnesota record was 10.84 inches in 1972. The resulting flooding from the 2007 rainfall caused 7 fatalities (MN DNR, 2007). In September 2010, a storm on the 22-23rd resulted in more than 6 inches of rain falling over 5,000 square miles in southern Minnesota. Rainfall totals of more than 8 inches were reported in portions of 10 counties. The heavy rain, falling on soils already sodden from a wet summer, led to numerous reports of major rural and urban flooding. For many monitoring locations in southern Minnesota, stream discharge resulting from the deluge was the highest ever seen during an autumn flood (Minnesota Climatology Working Group, 2010).

Four of the top ten wettest years in Sibley County occurred in the last two decades (MN DNR, 2020a).

5.1.4 VULNERABILITY

Potential economic loss estimates were based on county-specific building data. Sibley County provided parcel tax and spatial databases that included building valuations, occupancy class, square footage, year built, and number of stories. The quality of the inventory is the limiting factor to a Hazus flood model loss estimation. Best practices were used to use local data and assumptions were made to populate missing (but required) values.

Hazus reports the percent damage of each building in the floodplain, defined by the centroid of each building footprint. After formatting the tax and spatial data, 17,187 points were input to Hazus to represent buildings with a total estimated building plus contents value of \$1.8 billion. Approximately 49% of the buildings (and 53% of the building value) are associated with residential housing.

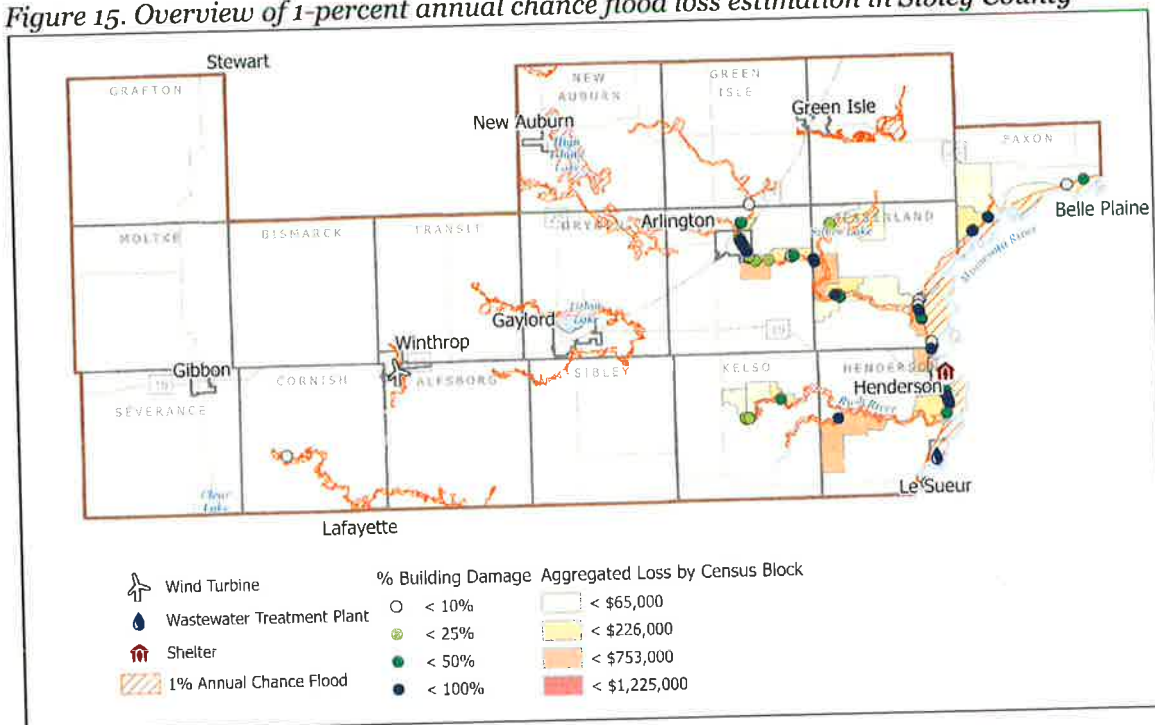
The estimated loss by occupancy class for the entire county is shown in Table 20.

Table 20. Summary of 1-percent annual chance flood loss estimation by occupancy class

General Occupancy	County Total Buildings	County Building and Contents Value	Floodplain Total Buildings	Floodplain Building + Contents Value	Buildings with damage	Building + Contents Loss
Residential	8,412	\$944,851,428	84	\$11,313,900	72	\$3,558,486
Commercial	541	\$88,758,120	5	\$722,400	5	\$191,932
Other	8,234	\$746,772,820	45	\$12,898,000	26	\$2,966,946
Totals	17,187	\$1,780,382,368	134	\$24,934,300	103	\$6,717,364

SOURCE: (FEMA, 2021c)

Figure 15. Overview of 1-percent annual chance flood loss estimation in Sibley County



SOURCE: (FEMA, 2021c)

The distinction between building attributes within a parcel was not known, so the maximum percent damage to a building in that parcel was used to calculate loss estimates for the entire parcel. The sum of all the losses in each census block were aggregated for the purposes of visualizing the loss. An overview of these results with the percent damage of buildings is shown in Figure 15. Please note: It is possible for a building location to report no loss even if it is in the flood boundary. For example, if the water depth is minimal relative to 1st-floor height, there may be 0% damage.

Hazus Critical Infrastructure Loss Analysis

Critical facilities and infrastructure are vital to the public and their incapacitation or destruction would have a significant negative impact on the community. These facilities and infrastructure were identified in Section 3.7 and verified by Sibley County.

Buildings identified as essential facilities for the Hazus flood analysis include hospitals, police and fire stations, and schools (often used as shelters). Loss of essential facilities are vulnerable to structural failure, extensive water damage, and loss of facility functionality during a flood, thereby negatively impacting the communities relying on these facilities' services.

Extreme precipitation resulting in flooding may overwhelm water infrastructure, disrupt transportation and cause other damage. Particularly where stormwater, sewage and water treatment infrastructure is

aging or undersized for more intense rainstorms, extreme rain events may pose both health and ecological risks in addition to costly damage (USGCRP, 2018).

It is important to identify any critical infrastructure within the 1-percent annual chance floodplain, given the higher risk of the facility or infrastructure being incapacitated or destroyed during a flood. In the county, the Minnesota New Country School, the Le Sueur wastewater treatment plant, and the Hometown WindPower wind farm were found to be at risk in the 1-percent annual chance flood. The Hometown WindPower wind farm is located in Alfsborg Township, just south of the City of Winthrop. This wind farm is not mapped, but all other critical infrastructure facilities are mapped in Figure 16. No other information is available.

Community Vulnerability

Potential economic losses were estimated by Census County Subdivision. The cities of Arlington and Henderson were the only cities with a significant estimated loss. All jurisdictions with buildings identified in the 1% annual chance flood zone are listed in Table 21.

Figure 16 shows jurisdictions in the county with the highest potential losses, as well as any mobile homes or critical infrastructure in the 1-percent annual chance flood zone. In addition to the aggregate economic loss by census block, the point locations used to represent flooded buildings are symbolized by percent damage to the building.

The status of jurisdictional participation in the National Flood Insurance Program and any repetitive loss properties are detailed in Section 6.1.1. National Flood Insurance Program (NFIP).

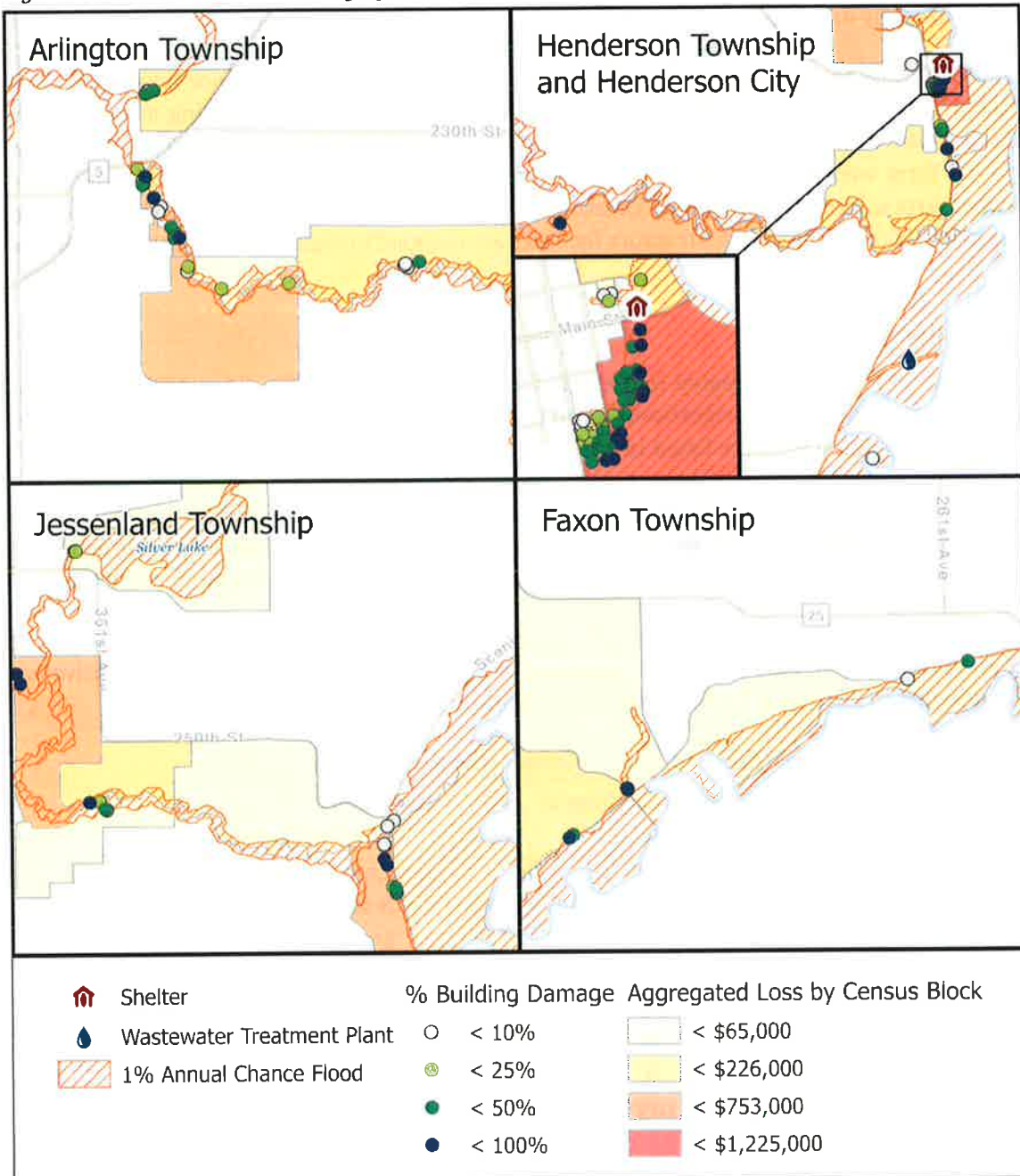
Table 21. 1-percent annual chance flood building-related loss estimates by jurisdiction

Jurisdiction (county subdivision)	Count of Buildings in Floodplain	Estimated Building and Contents Loss*
Arlington City	12	\$ 1,587,238.50
Arlington Township	5	\$ 288,171.50
Faxon Township	6	\$ 139,066.50
Henderson City	48	\$ 1,793,652.00
Henderson Township	10	\$ 1,228,620.50
Jessenland Township	18	\$ 1,453,665.00
Kelso Township	4	\$ 226,950.00
Total	103*	\$ 6,717,364.00

SOURCE: (FEMA, 2021C)

*It is possible for a building to register no loss even if it is in the flood boundary. For example, if the water depth is minimal relative to 1st-floor height, there may be 0% damage.

Figure 16. Communities with significant estimated 1-percent annual chance flood loss



SOURCE: (FEMA, 2021C)

5.1.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified several program gaps and deficiencies that make its citizens more vulnerable to flooding. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Surface Water Run-off Management: Controlling runoff from various sources continues to be a challenge and priority to control what runs downstream.

Increasing Culverts and Raising Roads: Some roads, bridges, and culverts within Sibley County continue to need improvements as they are impacted by annual high rain events. The county needs funding assistance to improve roads and culverts that experience repetitive flooding.

Road Infrastructure: Continued culvert replacement to prevent road flooding is a strain on smaller townships that have limited funding for road infrastructure.

Drainage System Improvements: The existing drainage systems in Sibley County were designed in the early 1900s and are inadequate to meet today's changing climate. The drainage systems are too small and are experiencing large amounts of damage during large flood events. Improvements such as storage, and expansion of the drainage system are needed to meet the large rainfall events associated with climate change.

5.2 Windstorms

A windstorm is a wind strong enough to cause damage to trees and buildings and typically exceeding 34 mph (Pielke, 2012). Windstorm events encompass a variety of types of damaging wind, including:

- *straight-line wind:* a thunderstorm wind not associated with rotation,
- *downdraft:* a small-scale column of air that rapidly sinks toward the ground,
- *downburst:* a strong downdraft with an outrush of damaging winds at or near the earth's surface,
- *microburst* and *microburst:* outward bursts of strong winds at or near the earth's surface, differentiated by the diameter of the burst,
- *gustnado:* a small whirlwind originating from the ground and not connected to any cloud-based rotation), and
- *derecho:* a widespread, long-lived windstorm associated with a band of rapidly moving showers or thunderstorms (NSSL, 2020).

Tornadoes are categorized as separate hazards from windstorms.

The National Weather Service (2018) classifies windstorm events using the following criteria.

- *Strong wind events* are non-convective winds gusting less than 50 knots (58 mph), or sustained winds less than 35 knots (40 mph), resulting in a fatality, injury, or damage.

- *High wind events* are sustained non-convective winds of 35 knots (40 mph) or greater lasting for one hour or longer or gusts of 50 knots (58 mph) or greater for any duration.
- *Thunderstorm wind events* are winds arising from convection (occurring within 30 minutes of lightning being observed or detected), with speeds of at least 50 knots (58 mph), or lower wind speeds producing a fatality, injury, or damage. Downbursts and gustnadoes are classified as thunderstorm windstorm events.

When wind speeds are not able to be measured, they are estimated. Part of the process to determine wind speed is observing the damage. Table 22 lists the expected effects of increasing wind speeds.

Table 22. Effects of wind speed

Wind Speed	Effects
26–38 knots (30–44 mph)	Trees are in motion. Lightweight loose objects (e.g., lawn furniture) may be tossed or toppled. Large trees bend; twigs, small limbs, and a few larger dead or weak branches may break.
39–49 knots (45–57 mph)	Old/weak structures may sustain minor damage. Buildings under construction may be damaged. A few loose shingles may be removed from houses. Carports may be uplifted and minor cosmetic damage may occur to mobile homes. Large limbs break; shallow rooted trees may be pushed over. Semi-trucks may be overturned. Significant damage to old/weak structures may occur. Shingles and awnings may be removed from houses, damage may occur to chimneys and antennas, mobile homes and carports may incur minor structural damage, and large billboard signs may be toppled.
50–64 knots (58–74 mph)	Trees experience widespread damage, including breaking and uprooting. Mobile homes may incur significant structural damage, including being pushed off foundations or overturned. Roofs may be partially peeled off industrial/commercial/warehouse buildings. Some minor roof damage may occur to homes. Weak structures (e.g., farm buildings, airplane hangars) may be severely damaged.
65–77 knots (75–89 mph)	Many large trees may be broken and uprooted. Mobile homes may be severely damaged; moderate roof damage to homes may occur, roofs may be partially peeled off homes and buildings. Moving automobiles may be pushed off dry roads. Barns and sheds may be demolished.
78+ knots (90+ mph)	

SOURCE: (NWS, 2018)

5.2.1 HISTORY

Sibley County experienced 13 high wind, one strong wind, and 110 thunderstorm wind events between 1955 and August 2021, with wind speeds up to 70 knots (81 mph) (NCEI, 2021). The majority of these windstorms occurred in June (28%) and July (32%). Wind damage to property and crops have cost the county more than \$8.3 million since 1960 (CEMHS, 2019). Table 23 lists the wind-related events that have occurred in the county since 2015. Thunderstorm wind events from 1955–2018 are mapped in Figure 17.

Table 23. Wind events in Sibley County, January 2015 – August 2021

Date	Event Type	Description
7/18/2020	Thunderstorm wind	A line of strong to severe thunderstorms caused damage to trees and blew down a power pole on County Road 2 in Gibbon.
6/28/2020	Thunderstorm wind	A complex of thunderstorms moved into the area, causing minor damage to a house and blowing down trees around a farm.
7/12/2019 (2 events)	Thunderstorm wind	A small complex of storms moved into west central Minnesota. Several wind gusts of 50-55 mph occurred, and sporadic trees were downed along the storm's path. \$15,000 worth of property damages occurred.
7/5/2019	Thunderstorm wind	A mesoscale convective system produced sporadic wind damage around Arlington. Part of a roof was blown off in Arlington; it could not be determined whether it was from a tornado or a severe downburst. A total of \$20,000 in property damages occurred.
6/30/2019	Thunderstorm wind	A bow echo caused wind damage and a few severe wind gusts. In the city of Arlington, a large tree blew down onto power lines.
6/4/2019 (4 events)	Thunderstorm wind	Scattered thunderstorms produced large hail and wind gusts of 45-50 mph. Damaging straight-line winds and downburst occurred. A farm near Gaylord lost two cows and had a machine shed completely destroyed. \$50,000 in property damages occurred.
7/12/2018	Strong wind	A line of thunderstorms developed along a cold front and moved eastward. Several trees, branches, and power lines were downed. \$200 in property damages occurred.
7/9/2017	Thunderstorm wind	Storms brought strong winds, heavy rain, hail, and tornadoes to south central Minnesota, damaging buildings, and crops in Sibley County.
12/26/2016	High wind	As a very strong storm system intensified, strong west winds developed. These winds gusted over 55 mph in portions of southern Minnesota.
5/24/2016	Thunderstorm wind	Scattered thunderstorms produced large hail and a damaging wind gust. Local officials indicated that one death may have occurred due to the storm, when a man on a four-wheeler was struck by a fallen tree.
4/1/2015	Thunderstorm wind	A line of thunderstorms developed ahead of a cold front. One storm became severe and caused a large tree to be blown down near Arlington.

SOURCE: (NCEI, 2021)

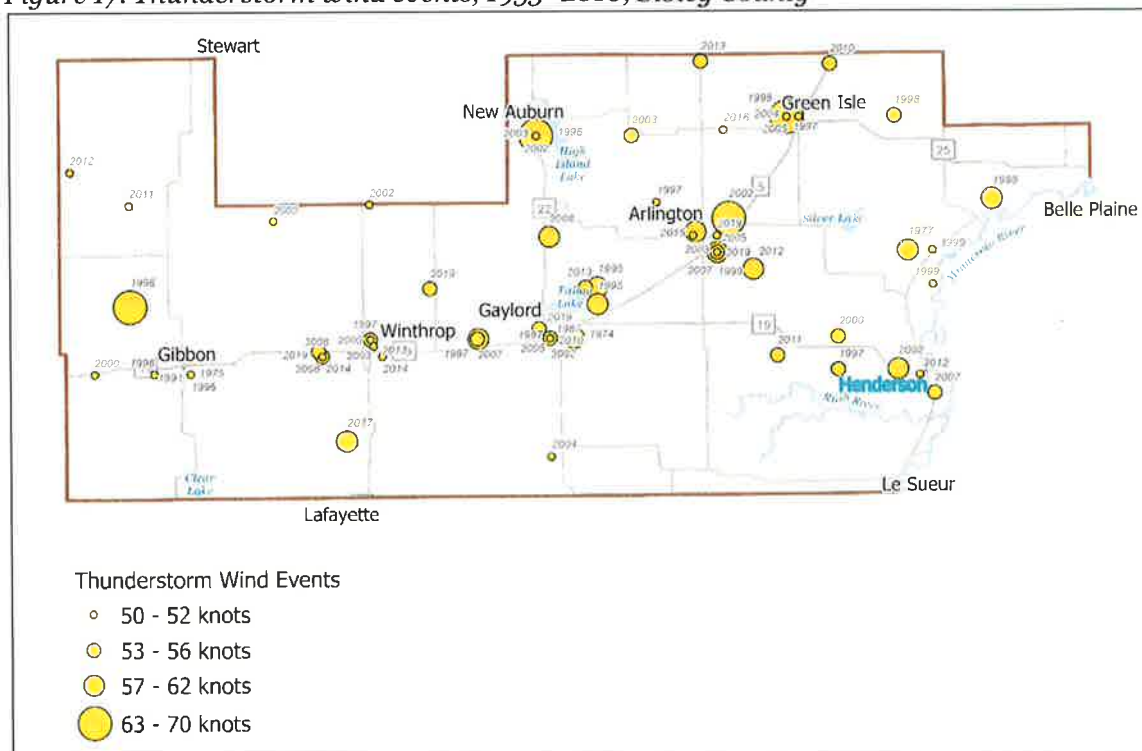
5.2.2 PROBABILITY OF OCCURRENCE

To determine the probability of future wind-related events in Sibley County, records of previous wind-related events (strong wind, high wind, and thunderstorm wind) in the county were examined for the period of record. Because the datasets have two different periods of record, separate relative frequencies were calculated. Thunderstorm wind events, which date back to January of 1955, have a relative frequency of 1.7 per year. The relative frequency of all wind-related events since January of 1996 is 3.7 per year. These relative frequencies can be used to infer the probability of these events occurring in the future.

5.2.3 CLIMATE CHANGE PROJECTIONS

Lack of high-quality long-term data sets make assessment of changes in wind speeds very difficult (Kunkel et al., 2013). One analysis generally found no evidence of significant changes in wind speed distribution (Pryor et al., 2009), while other models suggest an increase in the frequency and intensity of severe thunderstorms as the climate changes (USGCRP, 2018). The lack of confidence in the projections of future changes in thunderstorms, tornadoes, hail, and windstorms, is in part due to the difficulty in monitoring and modeling these small-scale and short-lived events (USGCRP, 2018). Since the impact of more frequent or intense storms can be significant, climate scientists are actively researching the connections between climate change and severe weather.

Figure 17. Thunderstorm wind events, 1955–2018, Sibley County



SOURCE: (NCEI, 2021)

5.2.4 VULNERABILITY

The likelihood of a windstorm event does not vary geographically within the county, but the vulnerability of its citizens is not constant. Vulnerability to injury from all kinds of windstorms decreases with adequate warnings, warning time, and sheltering in a reinforced structure. Therefore, residents living in rural areas, living alone or with limited mobility, or living in a manufactured home may be more vulnerable. Also at a higher risk to windstorms are those who work outdoors or do not have permanent housing.

Structural vulnerability depends in part upon the construction of a building and its infrastructure. Residents of mobile homes are more vulnerable to fatality or injury from windstorms because mobile homes are not able to withstand high winds as well as other structural dwellings, with 50 mph (43.4 knots) being the lower limit of wind speeds capable of damaging mobile homes (AMS, 2004). Steps to mitigate these vulnerabilities have been taken by the state, requiring all mobile home parks to provide an evacuation plan, and parks with at least 10 homes licensed after March 1, 1988 to provide a storm shelter (MDH, 2020). However, mobile home parks often do not provide the required storm shelters (Sepic, 2017). Building codes have also changed to improve the strength of new mobile home construction but there are still many older mobile homes in use that do not meet these new standards.

The Housing Type & Transportation and Household Composition & Disability themes of the Social Vulnerability Index (Table 15) include variables that can be helpful in identifying where these vulnerable citizens are concentrated within the county.

5.2.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified that there are several program gaps and deficiencies that make its citizens more vulnerable to summer storms, including windstorms, that should be addressed with new mitigation efforts to reduce vulnerability. These include:

Above-Ground Power Lines: A majority of the power lines in the county are above ground and subject to damage from high winds and falling tree limbs from severe summer storms. Power lines that are above ground are susceptible to coming down during severe storm events, resulting in power outages.

Warning Sirens: Some cities in the county are looking at potentially adding more sirens. The county parks do not currently have sirens. A future siren may be warranted for a portion of Jessenland Township near HWY 25 and CR 14 that has a rural housing development.

Public Education: Continued public education needs to be conducted during tornado season to inform the public on what is a tornado watch and what is a warning and what to do when warning sirens are activated. Sibley County Emergency Management and local cities need to continue to encourage all residents to be ready for long-term power outages resulting from severe spring and summer storm events such as thunderstorms or straight-line winds.

County Parks & Campgrounds: The Sibley County Parks and Recreation Department desires to construct storm shelter-rated facilities as it replaces restrooms and comfort stations within the park system. Priorities will be given to parks with campground facilities. Specifically, Rush River County Park, Clear Lake County Park, and High Island County Park, as they have RV and tent campers that are vulnerable to severe weather events such as high winds and damaging hail and thunderstorms. The campgrounds do not have an official storm shelter or tornado safe room.

Additional Storm Shelters/Tornado Safe Rooms: Additional storm shelter areas in the county would enhance public safety. Construction or retrofit of facilities should be evaluated for areas where there are vulnerable populations, such as municipal campgrounds, mobile home parks, and schools.

5.3 Tornadoes

Tornadoes are violently rotating columns of air formed in a thunderstorm when the rotating air of an updraft meets the spinning air of a downdraft, which has turned upward (UCAR, 2021). With wind speeds reaching up to 300 mph, they are one of nature’s most violent storms (Hogeback, 2020).

Since 2007, tornado strength in the United States has been measured using the Enhanced Fujita Scale (EF Scale), which replaced the original Fujita Scale (F Scale). The EF Scale is a set of estimated wind speeds based on damage (Table 24). The EF Scale incorporates the use of 28 damage indicators to derive estimated wind speeds and assign an associated EF rating (NWS, 2020b; SPC, 2007). The EF Scale is used extensively by the NWS to investigate tornadoes, and by engineers in correlating damage to buildings and building techniques.

Table 24. Enhanced Fujita Scale (EF Scale)

EF Rating	3-second gust (mph)
0	65–85
1	86–110
2	111–135
3	136–165
4	166–200
5	Over 200

SOURCE: (NWS, 2020B)

5.3.1 HISTORY

From 1950 through 2018, 1,940 tornadoes occurred throughout Minnesota, resulting in 99 deaths and nearly 2,000 injuries (MN DNR, 2019b). While most tornadoes in Minnesota are minor (Fo/EF0) and occur without injury, a number of the tornadic events will forever be remembered due to the sheer death and destruction they left behind. Examples include the St. Cloud/Sauk Rapids tornado of 1886, which claimed 72 lives, injured 213, and remains the deadliest tornado in the State’s history. May 6, 1965 is another day often remembered for tragedy when six tornadoes ravaged the Twin Cities, killing 13, injuring 683, and causing \$51 million in damages (without inflation adjustment) (MN DNR, 2019b).

The peak months of tornadic activity in Minnesota are June and July respectively (MN DNR, 2019b). According to the NCEI Storm Events Database, 34 tornadoes have occurred in Sibley County between 1950 and August 2021, resulting in one death, 75 injuries (NCEI, 2021), and an estimated 3.2 – 51.4 million U.S. dollars in property and crop damage (CEMHS, 2019; NCEI, 2021). The strength of these tornadoes ranged from Fo/EF0 to F3. The deadliest and most costly of these tornadoes occurred on May 6, 1965, when an F3 tornado formed near Green Isle and moved northeast flattening farm buildings and trees, before dissipating in Carver County. One death and 75 injuries were reported, along with \$25 million worth of damage (NCEI, 2021). Table 25 lists the tornadoes that have occurred in Sibley County since 2015.

Table 25. Tornadoes in Sibley County, January 2015–August 2021

Date	Start Location	End Location	Magnitude	Description
7/25/2020 (2 events)	Gaylord	Multiple	EFO-EF1	Two tornados began in Gaylord, with one ending in Gaylord and the other travelling to New Auburn. These tornados knocked down some tree branches. The EF1 tornado travelled across corn and bean fields and was captured on video.
7/5/2019	Henderson	Henderson	EFO	A brief tornado touched down in an open field. The strongest tornado of the day developed in northern Nicollet County and lifted into Sibley County. This was a multi-vortex tornado. One vortex struck a farmstead directly causing significant damage to trees and outbuildings. A second tornado moved across corn fields near Gaylord. The third tornado developed northeast of Winthrop. It flattened some corn, uprooted trees, and caused other tree damage. Near the end of its path, it destroyed a structurally compromised barn. A fourth and brief tornado moved across some fields near Gibbon before it dissipated. No crop damage was noted.
8/16/2017 (4 events)	Multiple	Multiple	EFO-EF1	

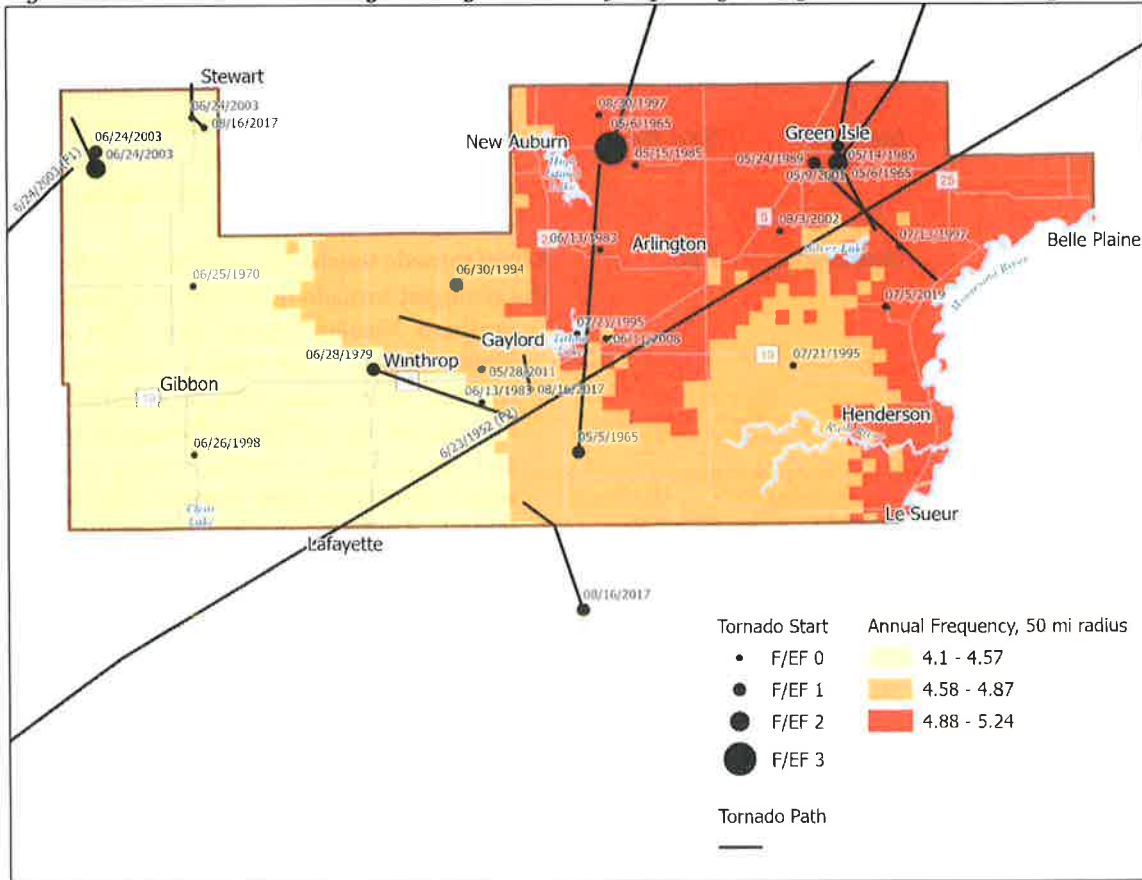
SOURCE: (NCEI, 2021)

5.3.2 PROBABILITY OF OCCURRENCE

Estimating the probability of future tornadoes in Sibley County was done using two methods. The first method summed the total number of tornadoes which either touched down in or traveled through the county. This sum was divided by the number of years tornado data was recorded, resulting in the annual relative frequency of tornado occurrences in the county. Based on records in the NCEI Storm Events Database through February 2020, the relative frequency of tornados in Sibley County is 0.5 per year. (These 32 tornadic events occurred in 17 of the 70 years on record.)

Because tornadoes often cross county lines and tornadic frequency may be better understood using events from a larger area, a second method was used to describe the frequency of tornadic events within a 50-mile radius of any location within the county. A grid of 900 square-meter cells was used to cover Minnesota and 50 miles beyond its border. From the center of each cell, the number of tornadoes that intersected a 50-mile radius was counted. Each cell was assigned a total tornado line count, which was then divided by the tornado dataset’s period of record, resulting in the annual relative frequency of tornadoes occurring within 50 miles of the respective cell.

Figure 18. Tornadoes in Sibley County & annual frequency in region, 1950–February 2020



SOURCES: (MN DNR, 2019B; NCEI, 2021)

For any location in Sibley County, there was an annual frequency of 4.1–5.2 tornadoes within a 50-mile radius. The historical frequency was only slightly higher in the southeast than the northwest. These relative frequencies can be used to infer the probability of these events occurring in the future.

Figure 18 shows the tornadoes that have occurred in Sibley County from 1950 through February 2020, as well as the annual frequency of tornado occurrences within 50 miles of any location within the county.

5.3.3 CLIMATE CHANGE PROJECTIONS

Tornadoes and other severe convective storms are the largest annual aggregated risk peril to the insurance industry, costing the U.S. \$11.23 billion (in 2016 USD) each year (Gunturi & Tippett, 2017). Although recent research has yielded insights into the connections between global warming and the factors that cause tornadoes and severe thunderstorms, such as atmospheric instability and increases in wind speed with altitude (Del Genio et al., 2007), these relationships remain mostly unexplored, largely because of the challenges in observing thunderstorms and tornadoes and simulating them with computer models (USGCRP, 2018).

According to Brooks et al., while the mean annual number of tornadoes in the U.S. has remained relatively consistent the variability of tornado occurrences has increased since the 1970s. According to the data, tornadoes have been occurring in larger clusters since the 1970's, with an overall decrease in the number of tornado days but an increase in the number of tornadoes that occur on tornado days (2014).

An increase in the variability of tornado occurrences affects the timing of the start of the tornado season (Brooks et al., 2014). The earliest reported tornado in Minnesota occurred on March 6, 2017, when two tornadoes touched down in southern Minnesota. These tornadoes occurred 12 days earlier and 115 miles further north than the previous record from 1968. According to State Meteorologist Paul Huttner, "Those records fit seasonally and geographically with longer term climate trends pushing weather events earlier in the season and further northward" (Huttner, 2017).

5.3.4 VULNERABILITY

The likelihood of a tornado does not vary significantly across geography within Sibley County; however, certain populations may be more vulnerable and less resilient to the impacts of a tornado. In general, tornado casualties decrease when people receive adequate warnings with sufficient time to seek shelter in a reinforced structure. Because communication is critical before a tornadic event, certain citizens may be more negatively impacted by a tornado, including those living in rural areas, individuals with limited mobility, people who do not live near an outdoor warning siren, or those who do not use social media.

As discussed in section 4.4.3, people living in mobile homes are particularly vulnerable to tornadoes due to them not being able to withstand the strong winds produced by a tornado. According to NOAA's Storm Prediction Center, from 1985–2002, 49% of tornado fatalities in the United States were people who remained within or attempted to flee from mobile homes (AMS, 2004). While Minnesota law requires most mobile home parks to have storm shelters, many do not (Sepic, 2017). Section 4.3 lists the mobile home parks in Sibley County.

Some of the vulnerability factors mentioned above are included as social factors in the Housing Type & Transportation and Household Composition & Disability themed SVI map (Table 15) and may provide general insight on where in the county these vulnerable communities are located.

5.3.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified that there are several program gaps and deficiencies that make its citizens more vulnerable to summer storms, including tornadoes, that should be addressed with new mitigation efforts to reduce vulnerability. These include:

Above-Ground Power Lines: A majority of the power lines in the county are above ground and subject to damage from high winds and falling tree limbs from severe summer storms. Power lines that are above ground are susceptible to coming down during severe storm events, resulting in power outages.

Warning Sirens: Some cities in the county are looking at potentially adding more sirens. The county parks do not currently have sirens. A future siren may be warranted for a portion of Jessenland Township near HWY 25 and CR 14 that has a rural housing development.

Public Education: Continued public education needs to be conducted during tornado season to inform the public on what is a tornado watch and what is a warning and what to do when warning sirens are activated. Sibley County Emergency Management and local cities need to continue to encourage all residents to be ready for long-term power outages resulting from severe spring and summer storm events such as thunderstorms or straight-line winds.

County Parks & Campgrounds: The Sibley County Parks and Recreation Department desires to construct storm shelter-rated facilities as it replaces restrooms and comfort stations within the park system. Priorities will be given to parks with campground facilities. Specifically, Rush River County Park, Clear Lake County Park, and High Island County Park, as they have RV and tent campers that are vulnerable to severe weather events such as high winds and damaging hail and thunderstorms. The campgrounds do not have an official storm shelter or tornado safe room.

Additional Storm Shelters/Tornado Safe Rooms: Additional storm shelter areas in the county would enhance public safety. Construction or retrofit of facilities should be evaluated for areas where there are vulnerable populations, such as municipal campgrounds, mobile home parks and schools.

5.4 Hail

A hailstorm is a storm producing spherical balls of ice. Hailstones form in a thunderstorm's unstable air mass when warm moist air rises rapidly into the upper atmosphere and subsequently cools, leading to the formation of ice crystals. The ice crystals grow into hailstones through the storm's updraft and downdraft cycle, each time being coated with a layer of ice until the hailstone becomes too heavy to be carried by the updraft and falls to the ground.

A number of factors determine the damage potential from hail including hailstone size, texture, numbers, fall speed, speed of storm translation, and strength of the accompanying wind (TORRO, 2021). The maximum hailstone size is the most important parameter relating to structural damage. Studies have determined that most property damage begins when hailstone diameters are $\geq .75$ in., while crop damage can occur from hailstones as small as .25 in (Changnon et al., 2009) depending on the crop and growth stage. Table 27 shows the TORnado and storm Research Organization's (TORRO) Hailstorm Intensity Scale, which describes the typical damage from different sized hailstones. Hailstorms occur throughout the year though are most frequent between May and August (NWS, 2020c). Although hailstorms rarely cause injury or loss of life, they do cost Minnesota nearly \$16 million in property and crop damage each year (CEMHS, 2019). In 2017, 44% of properties in Minnesota were affected by damaging hail events (Samanta & Wu, 2017).

Table 26. TORRO Hailstorm Intensity Scale

Intensity Category	Typical Hail Diameter (in.)	Typical Damage Impacts
H0 Hard Hail	.2	No damage
H1 Potentially Damaging	.2–.6	Slight general damage to plants, crops
H2 Significant	.4–.8	Significant damage to fruit, crops, vegetation
H3 Severe	.8–1.2	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4 Severe	1–1.6	Widespread glass damage, vehicle bodywork damage
H5 Destructive	1.2–2	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6 Destructive	1.6–2.4	Bodywork of grounded aircraft dented, brick walls pitted
H7 Destructive	2–3	Severe roof damage, risk of serious injuries
H8 Destructive	2.4–3.5	Severe damage to aircraft bodywork
H9 Super Hailstorms	3–4	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10 Super Hailstorms	> 4	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

SOURCE: (TORRO, 2021)

5.4.1 HISTORY

Sibley County experienced 100 hail events from 1955 through August 2021; 58% of these hailstorms produced hailstones ≥ 1 in. diameter. The largest hailstone recorded in Sibley County was 4 in., which occurred in Winthrop on July 9, 2017 (NWS, 2020c). Hail damage to property and crops have cost the county more than 5.2 million dollars since 1960, ranking the county 48th for hail damage incurred by Minnesota counties (CEMHS, 2019). Table 27 lists hail events in Sibley County that produced hailstones ≥ 1 in. diameter since January 2015. Figure 19 shows the hail events in Sibley County from 1955 through February 2017 that produced hailstones ≥ 1 in. in diameter.

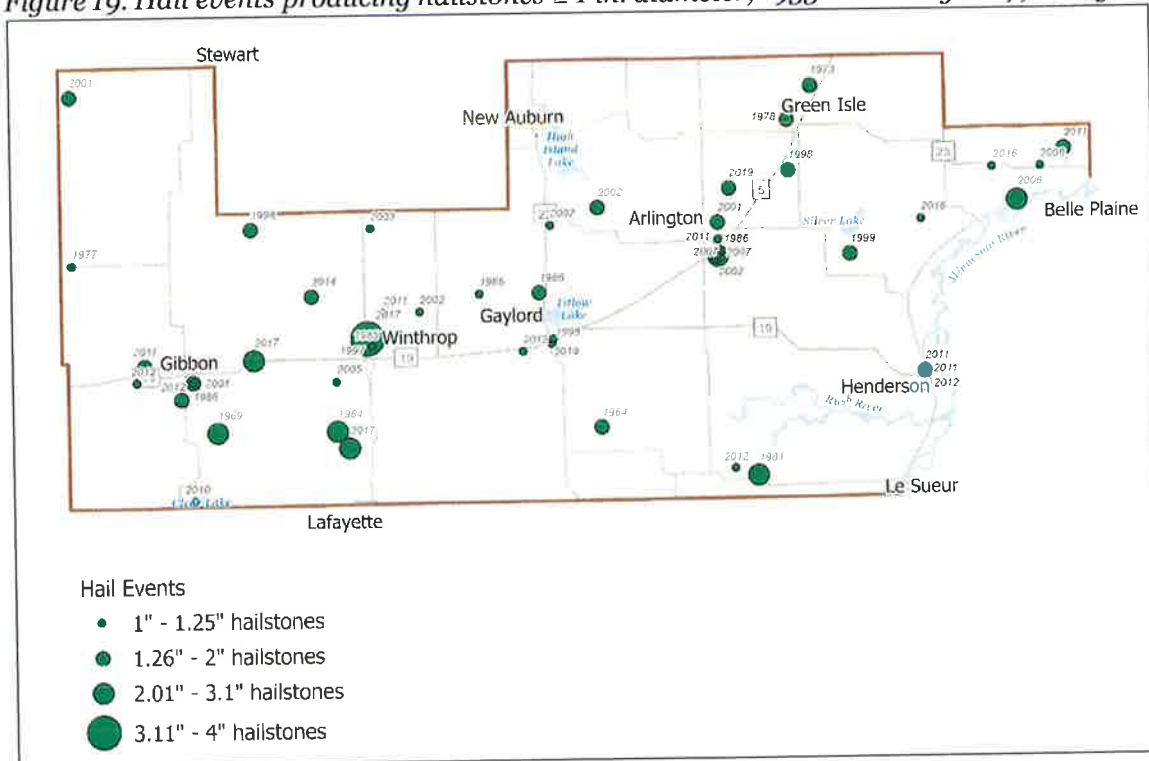
Table 27. Storms producing hail ≥ 1 in. diameter, Sibley County, January 2015–August 2021

Date	Location	Hailstone diameter (in.)	Damage
9/5/2020 (2 events)	Multiple	1	Elevated thunderstorms during the evening produced hail across the region.
8/14/2020	Gaylord	1	Thunderstorms along a warm front produced hail.
7/11/2020 (2 events)	Multiple	1.75–2.5	A swath of large hail, up to 2.5 inches in diameter, caused major crop damage along its path through northern Sibley County. Hail of up to 1.75 inches in diameter moved through central Sibley County.
7/5/2019	Arlington	1.5	An afternoon intensifying mesoscale convective system produced sporadic wind damage around Arlington, southeast to Henderson, Minnesota.

Date	Location	Hailstone diameter (in.)	Damage
6/4/2019	Gaylord	1	Scattered thunderstorms developed during the late morning across west central Minnesota. Wind damage and large hail occurred, with numerous reports of quarter size hail as well as a few as large as golf balls.
7/9/2017 (3 events)	Multiple	2.5-4	Storms brought strong winds, heavy rain, hail, and tornadoes to south central Minnesota, damaging trees, buildings, and crops in Sibley County. Softball-sized hail was reported in the Sibley County towns of Gibbon and Winthrop. \$250,000 worth of property damage and \$1,000,000 of crop damage was reported.
5/24/2016 (2 events)	Multiple	1-1.25	Scattered thunderstorms produced two areas of large hail across southern and central Minnesota. Hail was reported in Green Isle and Henderson.

SOURCE: (NWS, 2020c)

Figure 19. Hail events producing hailstones ≥ 1 in. diameter, 1955–February 2017, Sibley County



SOURCE: (NWS, 2020c)

5.4.2 PROBABILITY OF OCCURRENCE

To determine the probability of future hailstorms in Sibley County, records of previous hail events in the county were examined for the period of record. From January 1955 through February 2020, the relative frequency of hail events was 1.5 per year. This relative frequency can be used to infer the probability of

hail events occurring in the future. Please note that public reports of hail are often secondary to those of thunderstorm winds or tornadoes because if either damaging winds or tornadoes occur, the damaging wind and/or tornado are more important to the reporter and may result in underreporting of hail events.

5.4.3 CLIMATE CHANGE PROJECTIONS

Numerous models suggest an increase in the frequency and intensity of severe thunderstorms as the climate changes (USGCRP, 2018) but scientists are less confident of how it will specifically affect hail. Some studies indicate climate changes will result in fewer overall hail days but an increase in the mean hail size, the frequency of large hail events, and the overall damage potential of hail (Brimelow et al., 2017). The lack of confidence in the projections of future changes in thunderstorms, tornadoes, hail, and windstorms is in part due to the difficulty in monitoring and modeling these small-scale and short-lived events (USGCRP, 2018). Since the impact of more frequent or intense storms can be significant, climate scientists are actively researching the connections between climate change and severe weather.

5.4.4 VULNERABILITY

Sibley County’s agricultural lands and structures are vulnerable to hail damage and its citizens to injury and possibly death. Data from the Spatial Hazard Events and Losses Database for the United States (SHELDUS) was examined to identify the county’s monetary losses due to hail damage to crops, property, injury, and death. From 1960 through 2018 Sibley County reported \$5,156,102 in hail damages, ranking 48th among Minnesota counties in total hail damages. Sibley County losses are primarily due to crop damages reported at \$3,103,860, followed by \$2,052,242 in property damages. Crop indemnity payments due to hail totaled \$11,170,730 for the period of record spanning 1989–2018 (CEMHS, 2019).

Within Sibley County, the vulnerability of jurisdictions to hailstorms does not vary geographically. As with all summer storms, those who work outdoors or do not have permanent housing are at greater risk during hailstorms.

5.4.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified that there are several program gaps and deficiencies that make its citizens more vulnerable to summer storms, including hail, that should be addressed with new mitigation efforts to reduce vulnerability. These include:

Above-Ground Power Lines: A majority of the power lines in the county are above ground and subject to damage from high winds and falling tree limbs from severe summer storms. Power lines that are above ground are susceptible to coming down during severe storm events, resulting in power outages.

Warning Sirens: Some cities in the county are looking at potentially adding more sirens. The county parks do not currently have sirens. A future siren may be warranted for a portion of Jessenland Township near HWY 25 and CR 14 that has a rural housing development.

Public Education: Continued public education needs to be conducted during tornado season to inform the public on what is a tornado watch and what is a warning and what to do when warning sirens are activated. Sibley County Emergency Management and local cities need to continue to encourage all residents to be ready for long-term power outages resulting from severe spring and summer storm events such as thunderstorms or straight-line winds.

County Parks & Campgrounds: The Sibley County Parks and Recreation Department desires to construct storm shelter-rated facilities as it replaces restrooms and comfort stations within the park system. Priorities will be given to parks with campground facilities. Specifically, Rush River County Park, Clear Lake County Park, and High Island County Park, as they have RV and tent campers that are vulnerable to severe weather events such as high winds and damaging hail and thunderstorms. The campgrounds do not have an official storm shelter or tornado safe room.

Additional Storm Shelters/Tornado Safe Rooms: Additional storm shelter areas in the county would enhance public safety. Construction or retrofit of facilities should be evaluated for areas where there are vulnerable populations, such as municipal campgrounds, mobile home parks and schools.

5.5 Winter Storms

Winter storms encompass a number of winter weather events which the National Weather Service (NWS) organizes into the following categories: blizzard, heavy snow, ice storm, winter storm, and winter weather. Winter weather events are common in Minnesota and can be costly. According to the Spatial Hazard Events and Losses Database (SHELDUS), winter weather events in Minnesota have cost more than \$957 million dollars in damages since 1960 (CEMHS, 2019).

The definitions below are used to record winter storm events in the NWS Storm Events Database (NCEI, 2021).

Blizzard: A blizzard (Figure 20) is a winter storm that has the following conditions for at least three consecutive hours: (1) sustained winds or frequent gusts of 35 mph or greater, and (2) falling and/or blowing snow which reduces visibility to less than ¼ mile. Blizzards are the most dramatic and destructive of all winter storms generally characterized as bearing large amounts of snow accompanied by strong winds. They have the ability to completely immobilize travel in large areas and can be life threatening to humans and animals in their path. Blizzards in Minnesota have claimed the lives of 10 people since 1996: (NCEI, 2021).

According to the NWS, there is no fixed temperature requirement for blizzard conditions, but the life-threatening nature of low temperatures in combination with blowing snow and poor visibility increases dramatically when temperatures fall below 20° F. In Minnesota, blizzards typically occur between October and April, with the majority occurring the months of January, March, and November, respectively.

Figure 20. Thanksgiving Weekend Blizzard, 2019



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Damages from blizzards can range from human and livestock deaths to significant snow removal costs. Stranded drivers can make uninformed decisions, such as leaving the car to walk in conditions that put them at risk. Because of the blinding potential of heavy snowstorms, drivers are also at risk of collisions with snowplows or other road traffic. Drivers and homeowners without emergency plans and kits are vulnerable to the life-threatening effects of heavy snowstorms such as power outages, cold weather, and inability to travel, communicate, obtain goods, or reach their destinations. Heavy snow loads can cause structural damage, particularly in areas where there are

no building codes or where residents live in manufactured home parks. The frequency of structural fires tends to increase during heavy snow events, primarily due to utility disruptions and the use of alternative heating methods by residents.

Heavy Snow: A heavy snow event is characterized as snow accumulation meeting or exceeding the local/regional defined 12 and/or 24-hour warning criteria. Depending on the area, this could mean 4–8 inches or more of snow in 12 hours or less, or 6–10 inches or more of snow in 24 hours or less. Heavy snow events may cause structural damage due to the weight of snow accumulation.

Ice Storm: An ice storm is characterized by a buildup of ice (typically ¼–½ inch or more) due to freezing rain or other type of precipitation; however, even small accumulations of ice on sidewalks, streets, and highways may create extremely hazardous conditions to motorists and pedestrians. The terms “freezing rain” and “freezing drizzle” warn the public that a coating of ice is expected on the ground and other exposed surfaces.

Heavy accumulations of ice can bring down electrical wires, telephone lines, and even trees, telephone poles, and communication towers. The NWS notes that over 85% of ice storm-related deaths are the result of traffic accidents.

Winter Storm & Winter Weather: A winter storm is an event that has more than one winter hazard (i.e., heavy snow and blowing snow; snow and ice; snow and sleet; sleet and ice; or snow, sleet, and ice) and meets or exceeds locally/regionally defined 12- and/or 24-hour warning criteria for at least one of the precipitation elements. Winter weather is a winter precipitation event that causes a death, injury, or a significant impact to commerce or transportation, but does not meet locally/regionally defined warning criteria. The winter weather classification is also used to document out-of-season occurrences of winter precipitation.

5.5.1 HISTORY

Sibley County has an active history of winter-related weather events. Since 1996, the county experienced 93 events, including blizzards, heavy snows, ice storms, winter storms, and winter weather (NOAA NCEI, 2020). Winter weather events in the county have cost over \$8.3 million dollars in property and crop damages since 1960 (CEMHS, 2019). Table 28 provides descriptions from the NCEI Storm Events Database of the events that have occurred since 2014, the year the county’s MHMP was last updated.

Table 28. Winter-related weather events in Sibley County, January 2015–August 2021

Date	Type	Description
3/15/2021	Winter Storm	Six to eight inches of snow fell across Sibley County.
12/23/2020	Blizzard	A mixture of freezing rain, sleet, and snow started late Wednesday morning across the county. As much colder air arrived, temperatures dropped quickly which changed the mixture of precipitation to all snow. By the mid-late afternoon, blizzard conditions developed and continued through the evening. Gusts of 40 to 50 mph occurred, dropping visibilities.
10/20/2020	Winter Storm	Snowfall amounts across the county ranged from five to eight inches.
4/12/2020	Winter Storm	Six to seven inches of snow in less than 12 hours was reported near Henderson. Other areas of Sibley County had three to five inches during this event.
2/17/2020	Heavy Snow	Five to eight inches of snow fell across Sibley County.
2/8/2020	Winter Storm	Snow in the county was reported as reaching eight to ten inches of snow.
1/18/2020	Blizzard	Wind speeds were 25 to 35 mph, with gusts of up to 45 mph. Whiteout conditions were observed across the county through the late afternoon. Snowfall rates of one-half inch per hour occurred during the morning and early afternoon. Gusty winds accompanied the snowfall and freezing drizzle also occurred. Ice accumulated on top of the snow. Five to six inches of snow fell.
1/17/2020	Winter Storm	Several waves of precipitation occurred across the county with heavy snow at the start, and a mixture of sleet, rain, and snow during the overnight hours. Snowfall totals averaged nine to twelve inches across the county.
4/10/2019	Winter Storm	Blizzard conditions developed early in the morning. Several roads closed and there were a few car accidents. Winds were over 30 mph, with gusts of 45 mph at times during the height of the storm. Snowfall accumulated two inches.
2/24/2019	Blizzard	Around ten inches of snow fell across the county. The highest amount measured was eleven inches north of Henderson City. The heaviest snowfall occurred during the morning with snowfall rates of one to two inches per hour.
2/20/2019	Winter Storm	
1/27/2019	Winter Storm	Snowfall amounts in Sibley County averaged around six inches

Date	Type	Description
4/14/2018	Blizzard	Winds of 25 to 30 mph, with gusts above 45 mph, created very poor visibility and numerous accidents occurred, along with cars stuck in the snow across the county. Total snowfall amounts ranged from fourteen to eighteen inches.
4/13/2018	Winter Storm	Several waves of precipitation fell across Sibley County. The heaviest snowfall with rates were one to two inches per hour.
4/3/2018	Winter Storm	Snowfall amounts ranged from five to seven inches across the county.
3/4/2018	Winter Storm	The county received five to seven inches of snowfall during this winter storm. The storm also produced sleet, rain, and patchy freezing rain at times.
2/24/2018	Winter Storm	Between six and eight inches of snow were reported across the county.
1/22/2018	Winter Storm	Total snowfall amounts ranged from around a foot along the Minnesota River Valley, to less than two inches in the far west part of the county.
3/12/2017	Winter Storm	Six to eight inches of snow fell across far southeast Sibley County.
12/10/2016	Winter Storm	Between six to eight inches of snow fell across the county, with the heaviest along the Minnesota River.
3/23/2016	Winter Storm	Eight to twelve inches of snow fell during a nine-hour period.
2/7/2016	Blizzard	Sustained winds of 30 to 35 mph, with gusts of up to 40 mph, created widespread blowing snow and blizzard conditions in the far west part of the county.
2/2/2016	Winter Storm	Heavy snow fell across the county, accumulating six to ten inches of snow.
3/22/2015	Winter Storm	Between six and eleven inches of snow were estimated to have fallen in the county. The heaviest snow fell in the northeast portion of the county.
1/8/2015	Blizzard	Winds gusted up to 50 mph in open country, especially in the far western part of the county. Roads became hazardous with several accidents reported during the height of the blizzard.

SOURCE: (NCEI, 2021)

5.5.2 PROBABILITY OF OCCURRENCE

To determine the probability of future winter-related storm events in Sibley County, records of previous events (blizzards, heavy snows, ice storms, winter storms, and winter weather) were summed and divided by the dataset's period of record, resulting in the annual relative frequency of winter-related storms. Based on records in the NCEI Storm Events Database through January 2020, the relative frequency of winter-related storm events in Sibley County is 3.7 per year. This relative frequency can be used to infer the probability of these events occurring in the future.

5.5.3 CLIMATE CHANGE PROJECTIONS

Historically, winter storms have had a large impact on public safety in Minnesota. This will continue, with a possible increase in annual total snowfall (MPCA, 2018c). Winter weather is often the cause of power outages. Pressures on energy use, reduced reliability of services, potential outages, and the potential rise in household costs for energy are major climate change risks to public health.

According to the 2015 Minnesota Weather Almanac, seasonal snowfall records across the state from 1890–2000 showed that 41 of 46 climate stations recorded an increase in average annual snowfall, by as much as 10 inches. Climate change is causing the atmosphere to hold more moisture, that drives heavier than normal precipitation. Higher snowfall levels can result in greater runoff potential during spring snowmelt, and many watersheds in Minnesota have shown more consistent measures of high-volume flows during spring, often at or above flood stage (Seeley, 2015).

5.5.4 VULNERABILITY

Transportation systems, electrical distribution systems, and structures are vulnerable to winter storms throughout the county. These events do not vary geographically within the county; all jurisdictions are equally vulnerable. While it is highly likely these events will continue occurring annually, the amount of snow and ice and number of winter-related storm events to occur each year are unpredictable. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. It is important that extra consideration be given to the vulnerable populations and energy infrastructure discussed in Section 4.3.

5.5.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified several program gaps and deficiencies that make its citizens more vulnerable to severe winter storms. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Above-Ground Power Lines: A majority of the power lines in Sibley County are above ground and subject to damage from ice storms, wind, and falling tree limbs. Power lines that are above ground are susceptible to coming down during severe winter storm events, resulting in power outages.

Public Education: Sibley County Emergency Management and local cities need to continue to encourage all residents to be ready for long-term power outages or to be snowed in during dangerous winter events such as ice storms and blizzards.

Backup Power: Not all designated shelter facilities have generator back-up power to provide the ability to care for residents if displaced during a severe winter event coupled with an extended power outage.

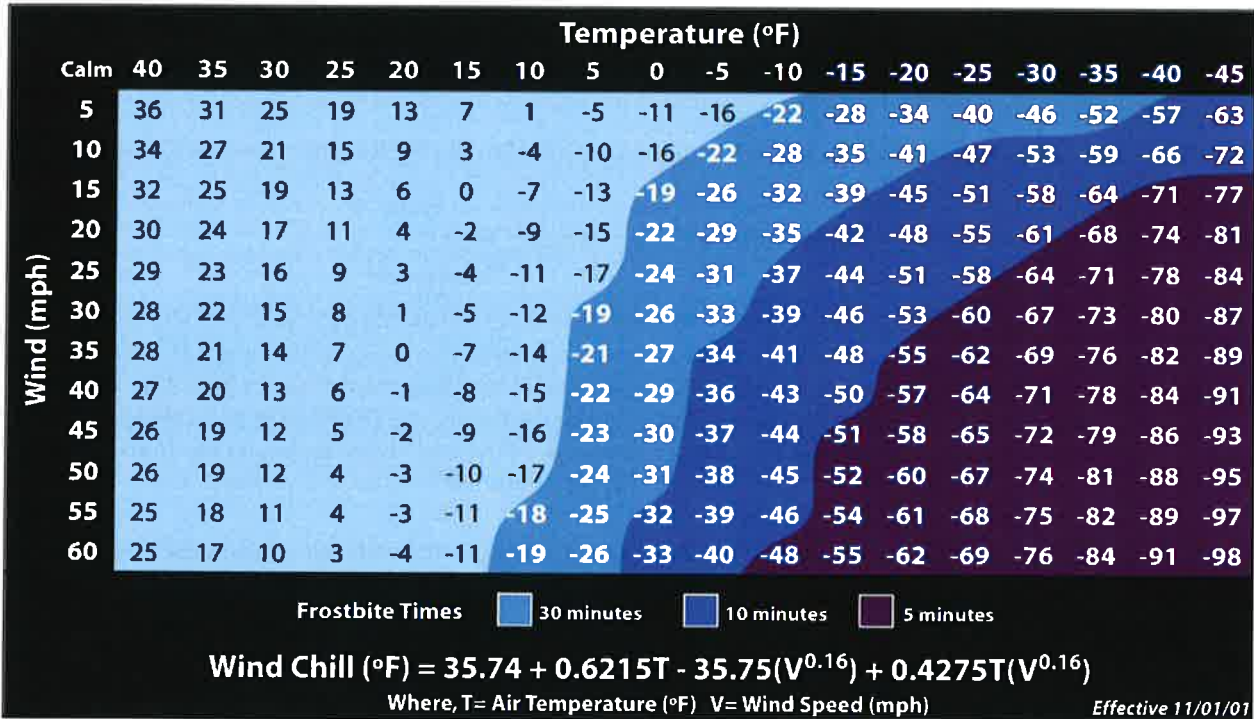
5.6 Extreme Cold

Due to Minnesota’s position in the middle of the continent and subsequent climate, the state may experience extremely frigid temperatures in winter. Winter in Sibley County can be especially dangerous when low temperatures and wind create arctic-like wind chills.

Wind chill, defined as how cold people and animals feel when outside, is based on the rate of heat loss from exposed skin caused by wind and cold. As wind increases it draws heat from the body, driving down skin temperature and eventually the internal body temperature.

The National Weather Service (NWS) issues a wind chill warning when life-threatening wind chill values are expected or occurring. The criteria for issuing official wind chill warnings and advisories are set by the local weather forecasting office (WFO). The Minneapolis WFO (MPX) uses a wind chill warning criteria of -35 °F or colder to issue a wind chill warning and -25 °F and colder for a wind chill advisory in Sibley County (NWS, 2010). Figure 21 shows the relationship between temperature and wind speed to measure wind chill.

Figure 21. NWS wind chill temperature index



SOURCE: (NWS, 2010)

5.6.1 HISTORY

Extreme cold temperatures affect Sibley County nearly every year. January is the coldest month in the Central Minnesota climate division, with an average monthly minimum temperature of 3.4 °F (Vose et

al., 2021). Extreme cold data was compiled from the Midwestern Regional Climate Center (MRCC) using daily minimum temperature data from weather stations in Sibley County, which have complete datasets (< 10% missing data), as well as cold-related events reported in the NCEI Storm Events Database. Extreme cold days in Sibley County were counted each day a station’s daily minimum temperature reached -18°F , a standard used by the National Weather Service to report cold weather events (2018).

There is one weather station in the county currently reporting daily temperature. From January 1, 2015 through June 8, 2020, daily low temperatures $\leq -18^{\circ}\text{F}$ were recorded 13 times at the Gaylord station (GHCN, 2020; NWS, 2020a; NWS COOP, 2020). Sibley County experiences an average of 2–3 extreme cold days each year. The lowest daily low temperature reported since January 2015 was -29°F reported by the Gaylord station on January 30, 2019. This date corresponds with the “Polar Vortex” of late January 2019 that affected most of the state. Strong winds and arctic air on the heels of a snowstorm brought bitter cold to Minnesota. Schools closed and postal mail service stopped statewide. The extreme cold also brought some natural gas shortages, power outages, and broken water mains.

The lowest temperature ever reported in Sibley County occurred on February 3, 1996 when temperatures plummeted to -34°F at the Gaylord station (GHCN, 2020; NWS, 2020a; NWS COOP, 2020).

Daily minimum temperatures mentioned above do not factor in wind chill. The NCEI Storm Events Database includes eight cold/wind chill and twelve extreme cold/wind chill events affecting Sibley County since 1996 (NCEI, 2021). No one in Sibley County died or was injured from these events; however, indirect deaths due to stress on those with other serious health conditions were likely to have occurred.

Table 29 shows cold-related events in Sibley County as reported to the NCEI Storm Events Database since January 2015.

Table 29. Cold events in Sibley County, January 2014–August 2021

Date	Event Type	Description
2/14/2021	Extreme cold/ wind chill	An Arctic air mass moved southward across the Upper Midwest. The lowest recorded wind chill value of -43°F occurred near Winthrop.
2/13/2021	Extreme cold/ wind chill	An Arctic air mass moved southward across the Upper Midwest. The lowest recorded wind chill value of -46°F occurred near Winthrop.
2/12/2020	Extreme cold/ wind chill	Wind chill values dropped below -35°F by mid evening of Wednesday, February 12th. These wind chill values continued until Thursday morning.
1/29/2019	Extreme cold/ wind chill	Several weather sources measured wind chill values lower than -35°F . The coldest wind chill was -54°F at the Gaylord airport.
12/30/2017	Extreme cold/ wind chill	Several sources reported wind chill values averaging around -35°F which started early Saturday morning and continued through Sunday morning.
12/17/2016	Extreme cold/ wind chill	Airport and public weather stations indicated wind chills dropped below -35°F for several hours. The coldest wind chill values were around sunrise when a few locations reached -45°F in open areas.
1/17/2016	Extreme cold/ wind chill	Several sources of weather observations indicated that wind chill values dropped to around -35°F for a few hours.

SOURCE: (NCEI, 2021)

5.6.2 PROBABILITY OF OCCURRENCE

To determine the probability of future cold-related events in Sibley County, records of previous cold/wind chill and extreme cold/wind chill events were summed and divided by the dataset's period of record, resulting in the annual relative frequency. Based on records in the NCEI Storm Events Database through January 2020, the relative frequency of cold-related events in Sibley County is .8 per year. (NCEI, 2021). These 18 events occurred in 10 of the 24 years on record. This relative frequency can be used to infer the probability of these events occurring in the future.

5.6.3 CLIMATE CHANGE PROJECTIONS

Although climate research indicates that Minnesota's average winter lows are rising rapidly and our coldest days of winter are now warmer than we have ever recorded (MN DNR, 2020a) cold temperatures have always been a part of Minnesota's climate and extreme cold events will continue. An increase in extreme precipitation or storm events such as ice storms as the climate changes could lead to a higher risk of residents being exposed to cold temperatures during power outages or other storm-related hazards during extreme cold.

5.6.4 VULNERABILITY

The risk of extreme cold does not vary geographically within the county. Citizens living in climates such as these must always be prepared for situations that put their lives or property at risk. The youngest and more elderly citizens, homeless persons, individuals with chronic medical conditions, and those who are working or recreating outdoors are most at risk for frostbite and hypothermia (MDH, 2021b)

It is not always the depth of the cold that poses a threat but rather unpreparedness for the cold, such as an individual with a vehicle breakdown who lacks a personal winter safety kit in the vehicle. The cost of propane can make rural citizens more vulnerable to issues with extreme cold. A propane shortage and resulting crisis, such as that which occurred in 2014, may increase the cost of heating homes and farms to a prohibitive amount (Eaton, 2014). The Minnesota Department of Commerce presents options and suggestions for homeowners who use propane on their website: <https://mn.gov/commerce/consumers/tips-tools/propane/>

The CDC publication "Extreme Cold: A Prevention Guide to Promote Your Personal Health and Safety" outlines preparation measures individuals can take to reduce their vulnerability to extreme cold. Highlights in this document include advice about travel preparations, securing your home water supply, and safety during recreation (CDC, 2021).

5.6.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified several program gaps and deficiencies that make its citizens more vulnerable to extreme cold. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Generators for Backup Power to Healthcare Facilities: Not all assisted living, long-term care, and nursing home facilities have backup generator power. In the event of extreme cold periods coupled with a power outage these facilities would be at high risk with vulnerable populations.

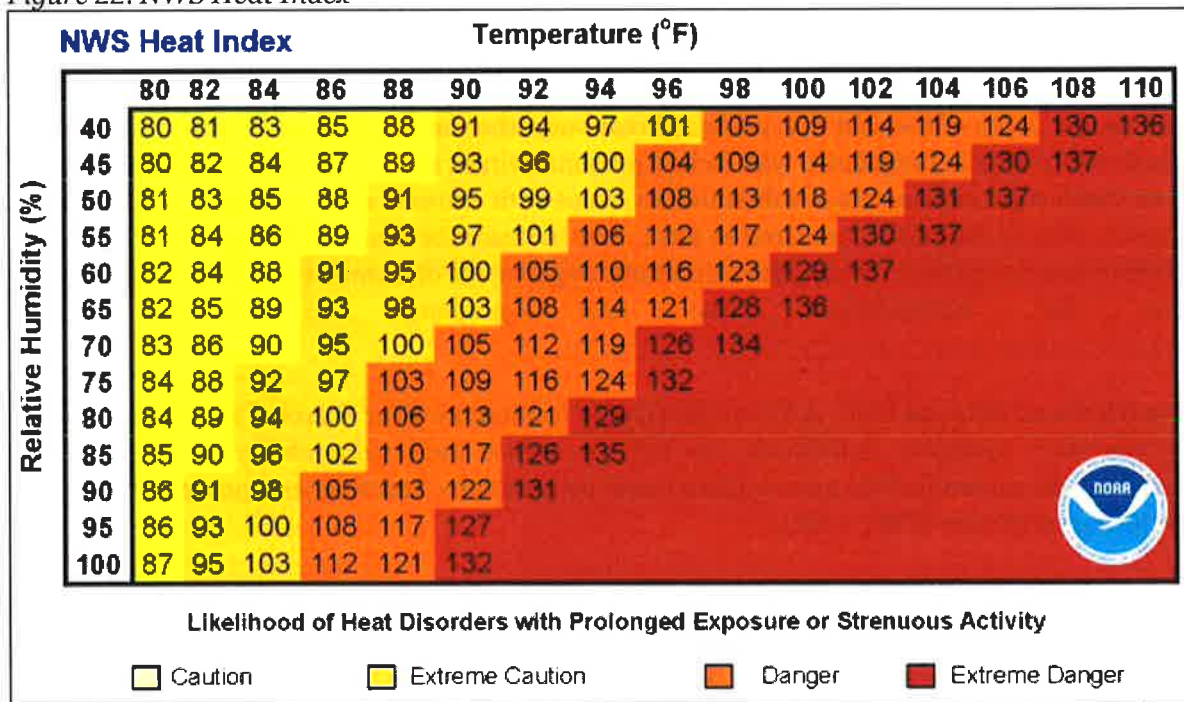
Generators for Backup Power to Shelter Facilities: Not all designated shelter facilities have generator back-up power to provide heat if there is a loss of power during an extreme cold event.

5.7 Extreme Heat

Extreme heat is the combination of very high temperatures and exceptionally humid conditions. When the atmospheric moisture content is high, the rate of perspiration from the body decreases and the human body feels warmer (NWS, 2021). Heat stress can be indexed by combining the effects of temperature and humidity. The NWS Heat Index in Figure 13 is a measure of how hot the body feels when relative humidity is factored in with actual air temperature. The heat index values are for shady locations—exposure to direct sunlight may increase these values by up to 15 °F.

Extreme heat events are linked to a range of illnesses, even death, and can exacerbate pre-existing chronic conditions (Moss, 2017). Medical costs related to extreme heat can be enormous: in 2005, the total was \$1.5 billion nationwide, or more than \$16,000 per patient (Union of Concerned Scientists, 2009). Heat-related hazards have cost Sibley County over \$63,000 in property damages since 1960 (CEMHS, 2019).

Figure 22. NWS Heat Index



SOURCE: (NWS, 2021)

Figure 23. Heat effects on the Body

Classification	Heat Index	Effect on the body
Caution	80°F - 90°F	Fatigue possible with prolonged exposure and/or physical activity
Extreme Caution	90°F - 103°F	Heat stroke, heat cramps, or heat exhaustion possible with prolonged exposure and/or physical activity
Danger	103°F - 124°F	Heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity
Extreme Danger	125°F or higher	Heat stroke highly likely

SOURCE: (NWS, 2021)

Figure 23 describes the effects increasing levels of heat has on the body during prolonged exposure and/or physical activity.

5.7.1 HISTORY

According to data obtained from the Midwestern Regional Climate Center (MRCC), July is the warmest month in Central Minnesota, the climate division in which Sibley County is located, with a mean high temperature of 81.6 °F (Vose et al., 2021). To measure the frequency of extreme heat days in Sibley County, the county’s weather station’s daily maximum temperatures were examined with 90 °F used as the benchmark. Sibley County contains one active weather station with a complete datasets (< 10% missing data). From January 1, 2015 through June 8, 2020, daily high temperatures ≥ 90 °F were reported 48 times from the Gaylord station (GHCN, 2020; NWS, 2020a; NWS COOP, 2020). Sibley County experiences an average of 8-9 extreme heat days each year. The highest daily maximum temperature reported during this time was 99 °F recorded by the Gaylord station on May 29, 2018.

The highest temperature ever reported in Sibley County occurred on July 31, 1988 when temperatures reached 105 °F at the Gaylord station (GHCN, 2020; NWS, 2020a; NWS COOP, 2020).

Daily maximum temperatures do not factor in humidity. For this information, we look to the NCEI Storm Events Database, which receives data on heat and excessive heat events from NWS. According to the NWS, a heat event results from a combination of above normal high temperatures and relative humidity, while an excessive heat event is characterized by well above normal high temperatures and high humidity (2018). Heat-related events are reported to the Storm Events Database whenever heat index values meet or exceed locally/regionally established heat thresholds. In Minnesota, a heat advisory is issued when the maximum heat index is around 100 °F or higher. An excessive heat warning occurs when the maximum heat index is around 105 °F and the minimum heat index is around 75 °F or higher (NWS, 2019).

Since January 1996, six heat and three excessive heat events occurred in Sibley County (NCEI, 2021). Only one of these events occurred since the county’s last HMP Update—an excessive heat event on July 20, 2016, when heat indices across Sibley County rose over 105 °F for several hours during the afternoons of July 20 and 21. The highest the heat index reached was 112 °F. No injuries or fatalities resulted from

this event; however, indirect deaths due to stress on those with other serious health conditions were likely to have occurred.

5.7.2 PROBABILITY OF OCCURRENCE

To determine the probability of future heat-related events in Sibley County records of previous heat and excessive heat events were summed and divided by the dataset's period of record, resulting in the annual relative frequency of heat-related events. Based on records in the NCEI Storm Events Database through January 2020, the relative frequency of heat-related events in the county is .4 per year. These nine events occurred in six of the 24 years on record. This relative frequency can be used to infer the probability of these events occurring in the future.

5.7.3 CLIMATE CHANGE PROJECTIONS

Seven of Minnesota's 10 warmest years occurred in the last 15 years. Projected increases of 2°F to 6°F more are expected by 2050 and 5°F to 10°F more by 2100 (MN EQB, 2014). The Midwest has experienced major heat waves, and their frequency has increased over the last six decades (Perera et al., 2012). For the U.S., mortality increases 4% during heat waves compared with non-heat wave days (Anderson & Bell, 2011). Heat stress is projected to increase as a result of climbing summer temperatures and humidity (Schoof, 2012).

Sibley County's exposure to extreme heat is expected to increase if no action is taken to reduce heat-trapping emissions. Several factors are used to indicate changes in extreme heat exposure, including cooling degree days. Cooling degree days are used to indicate the amount of cooling a building will need in response to weather, based on a threshold of 65 °F. Days with a daily average temperature above this threshold are known as cooling degree days referencing the need for cooling inside buildings. Cooling degree days are calculated from the daily average temperature minus 65 °F. For example, if a weather station recorded an average daily temperature of 78 °F, cooling degree days for that station would be 13. In 2019, Sibley County had 457 cooling degree days. With medium action to curb climate change, Sibley County is projected to have 525 cooling degree days by 2050. With low action to curb climate change the expected number of cooling degree days within the county jumps to 683 days by 2050 (MDH & University of Minnesota, 2019)

5.7.4 VULNERABILITY

The Minnesota Department of Health released a 2012 Minnesota Extreme Heat Toolkit, to help local governments prepare for extreme heat events. In their toolkit, they note extreme heat events are often dubbed "silent killers" because deaths and illnesses from these events are often misunderstood and underreported. Minnesota has no official system to report deaths and illnesses linked to extreme heat (MDH, 2012). It is important to not underestimate the danger of extreme heat events within the state.

High temperatures can be exacerbated by the urban heat island effect in densely developed areas, an effect that amplifies higher temperatures in areas with a higher concentration of impervious and paved surfaces. These types of surfaces absorb more heat and hold it for longer than vegetation cover (EPA,

2019). Impervious surfaces cover 3% of Sibley County (MDH & University of Minnesota, 2019). Impervious surfaces are not spread evenly throughout the county and attention should be given to cities or areas within the county that contain the largest amounts of this type of surface cover. Except for these areas, the risk of extreme heat does not vary geographically.

The impact extreme heat has on individuals is not equal. According to the Center for Disease Control and Prevention (CDC), population groups more vulnerable to extreme heat include:

- Older adults (≥ 65 years old). The elderly are not able to easily adjust to sudden changes in temperature and are more likely to have a chronic medical condition, or take medication affecting their body's ability to control its temperature.
- Infants and children. Young children and infants have limited control with their surroundings and rely on others to keep them cool and hydrated.
- Individuals with chronic health conditions. These individuals are less likely to respond to changes in temperature, may be taking a medication which exacerbates the effects of extreme heat, or have a condition which is a risk-factor for heat-related illness (e.g., heart disease, mental illness, poor blood circulation, and obesity).
- People with low income. These individuals may not be able to afford to properly cool their home and may face transportation challenges when trying to access cooling shelters.
- Athletes and people working outdoors. Both groups are likely to exert energy while being exposed to the heat (CDC, 2020).

Warming temperatures will continue to increase the risk of extreme heat, especially among these already vulnerable populations. In 2018, 18% of Sibley County's population was over 65 years old, 25% of the county was classified as low income, and 17% of the county were beneficiaries of Medicare (MDH & University of Minnesota, 2019). Many of the population groups vulnerable to extreme heat are included as social variables in the CDC's SVI data, specifically in the Socioeconomic Status, and Household Composition & Disability themes. See Section 4.3.1 for information on geographic variability of social vulnerabilities in SVI themes.

5.7.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified several program gaps and deficiencies that make its citizens more vulnerable to extreme heat. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

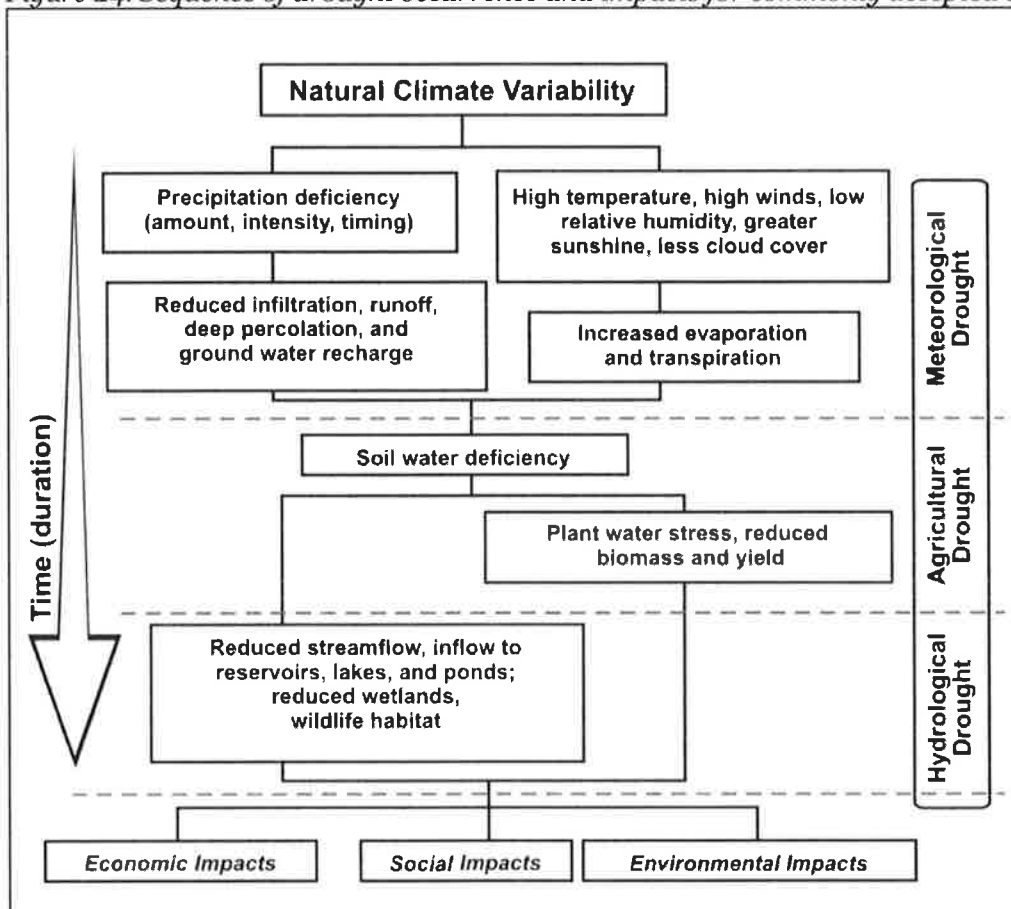
Generators for Backup Power to Healthcare Facilities: Not all assisted living, long-term care, and nursing home facilities have backup generator power. In the event of extreme heat periods coupled with a power outage these facilities would be at high risk with vulnerable populations.

Generators for Backup Power to Shelter Facilities: Not all designated shelter facilities have generator back-up power to provide cooling if there is a loss of power during an extreme heat event.

5.8 Drought

Within the broad domain of natural hazards that comprise disaster science, drought is unequivocally the most difficult to define. This is primarily due to its insidious nature, and because the parameters that typically control it vary both spatially and temporally. For instance, the hydro-meteorological conditions that constitute drought in one location may not necessarily qualify as drought in a contrasting climate. Even in regions that share a statistically similar climate, other factors such as soil type, antecedent moisture conditions, ground cover, and topography all play a vital role in dictating drought emergence. To further complicate matters, drought is associated with a diverse number of climatic and hydrological stressors, all of which come with a unique set of collective impacts that affect nearly every corner of our economy and environment. Subsequently, there are over 150 different definitions of drought, not just because it is difficult to define, but precisely on the grounds that drought affects different regions in different ways (Fu et al., 2013). When one attempts to merge and understand these various definitions and impacts, it is evident that drought can be integrated into five principal categories, including: meteorological, agricultural, hydrological, ecological, and socio-economic drought (Figure 24).

Figure 24. Sequence of drought occurrence and impacts for commonly accepted drought types

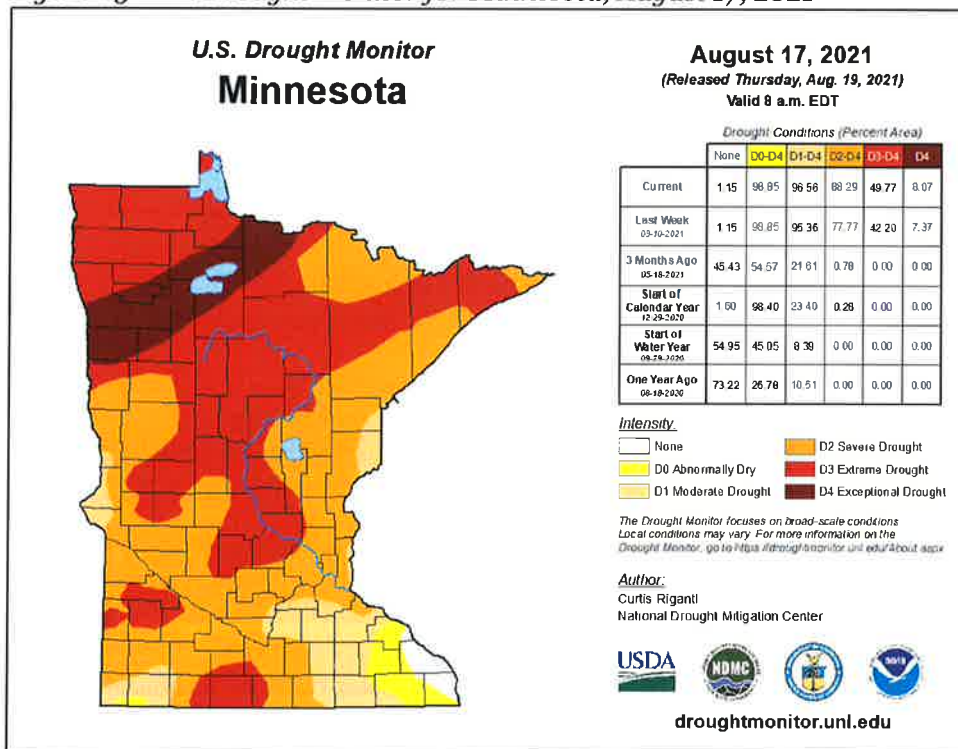


SOURCE: (NDMC, 2021)

Meteorological drought is qualified by any significant deficit of precipitation. Hydrological drought is manifest in noticeably reduced river and stream flow and critically low groundwater tables. The term agricultural drought indicates an extended dry period that results in crop stress and harvest reduction. Socioeconomic drought refers to the situation that occurs when water shortages begin to affect people and their lives. It associates economic goods with the elements of meteorological, agricultural, and hydrological drought. Many supplies of economic goods (e.g., water, food grains, and hydroelectric power) are greatly dependent on the weather.

There are numerous approaches to assessing drought conditions. The current gold standard for accurate drought conditions in the United States is the United States Drought Monitor (USDM) Map. Established by the National Drought Mitigation Center (NDMC) in 1999, the Drought Monitor is a weekly map that depicts drought conditions in all 50 states and Puerto Rico. Each weekly map is produced by a NDMC-assigned author. Though drought map authors utilize a broad domain of geospatial, climatic data, as well as drought indices that cover every aspect of drought, perhaps their most valuable resource is the input they receive each week from hundreds of drought experts throughout the country. The drought monitor map is thus a collective synthesis of the best quantitative and the most reliable qualitative information available. Figure 25 displays an example map and statistics table prepared by the USDM for Minnesota on August 17, 2021; This figure shows the first introduction of a D4 area in the state on MN since the USDM process began in early 2000.

Figure 25. U.S. Drought Monitor for Minnesota, August 17, 2021



SOURCE: (NDMC et al., 2021)

In total, there are four drought categories:

- moderate (D1)
- severe (D2)
- extreme (D3)
- exceptional (D4)

A fifth category, abnormally dry (D0), is used to depict areas that are abnormally dry but not yet in drought. Abnormally dry conditions are indicative of the meteorological circumstances that precede drought onset and those that are coming out of drought. D0 is often considered a bellwether of drought but it is also an accurate warning sign that crop growth may be slowed, and wildfire risk may be elevated (NDMC et al., 2021). Table 30 describes the impacts reported from previous droughts in Minnesota for each drought level.

The decision to declare or alter a drought category in each location is dependent upon a comprehensive set of climate products that are specifically manufactured to quantify drought. Many of these products are referred to as drought indices, and these indices each serve a specific purpose. There are indices that are designed for measuring short-term drought, and there are indices that are built to reflect long-term drought. Similarly, other indices are useful for sector-specific areas such as water resources or agriculture. The NCEI Storm Events Database uses the US Drought Monitor’s drought classification system as a guide to determine which droughts to include in the database. For locations east of the Rocky Mountains, only drought events categorized as severe (D2) or higher are included (NWS, 2018).

Table 30. Observed drought impacts in Minnesota

Category		Impact
D0	Abnormally Dry	Soil moisture is low; pasture and row crops are stressed Fire danger increases Weather is good for construction projects Lake and river levels decline; water temperatures rise
D1	Moderate Drought	Winter snow events are canceled River and lake levels are lower than normal
D2	Severe Drought	Ground is hard; seed corn is short; feed is expensive; crop yields are low Fire danger is high; burn permits are required Landscaping is stressed; leaves change colors early Bears search for food; trout runs are hampered; fish kills occur River flow is very low; snowpack is significantly lower; well levels decrease
D3	Extreme Drought	Corn is harvested early; emergency haying and grazing are authorized Wildfires are widespread Surface waters are near record lows
D4	Exceptional Drought	Minnesota has had little or no experience in D4, so no impacts have been recorded at that level in the Drought Impact

SOURCE: (NDMC ET AL., 2021)

5.8.1 HISTORY

According to the USDM, since 2000, the longest drought \geq D2 in Sibley County is 36 consecutive weeks, which occurred September 11, 2012–May 20, 2013. This is also the most intense drought the county has experienced. For 29 weeks 32% of the county was classified as being in a D3 extreme level drought. The county is currently in its most serious drought since its last Hazard Mitigation Plan in 2015. The drought began in June 2021, and as of September 14, 92% of the county is in a level D2 drought, (NDMC et al., 2021). As of September, 2021 is the 19th driest year in Sibley County in 127 years (NIDIS, 2021). Drought conditions in 2021 are the worst Minnesota has experienced since 1988. By the end of July 2021, the DNR had suspended water appropriations in 17 major watersheds, mostly in northern Minnesota. Suspension of more surface water appropriations is expected, unless there is a dramatic change in the current precipitation pattern (MN DNR, 2021b).

The drought of 1988 is another significant drought that impacted all of Minnesota. Below normal precipitation coupled with declining lake levels, ground water levels, and stream flow created statewide concern. To facilitate coordination of drought response actions, a State Drought Task Force was convened by the Director of the Division of Waters. The State Drought Task Force brought together local, state, and federal officials to share information and coordinate drought response strategies. Several actions were taken following the summer of 1988 to better prepare the state for the next drought. The Governor appointed a Twin Cities Water Supply Task Force specifically to make recommendations on how to meet future water demands in the event of low flow conditions on the Mississippi River. The U.S. Corps of Engineers initiated review of its operating plans for the Mississippi River headwater reservoirs, and the 1989 legislature charged the Metropolitan Council with preparing water use and supply plans for the metropolitan area. Today the responsibilities, plans and actions related to drought planning are outlined in the Minnesota Statewide Drought Plan (MN DNR, 2009).

When comparing the two most recent five-year timeframes (2011–2015 and 2016–2020) the USDM data shows a reduction in the percent of county land affected by drought at all levels. Table 31 shows the breakdown of this comparison.

Table 31. Average percent of Sibley County’s land area by drought category

Timeframe	No Drought	DO	D1	D2	D3	D4
2011–2015	40%	24%	10%	13%	13%	0%
2016–2020	72%	8%	13%	7%	0%	0%
% Change	+80%	-67%	30%	-46.2%	-100%	0%

(NDMC ET AL., 2021)

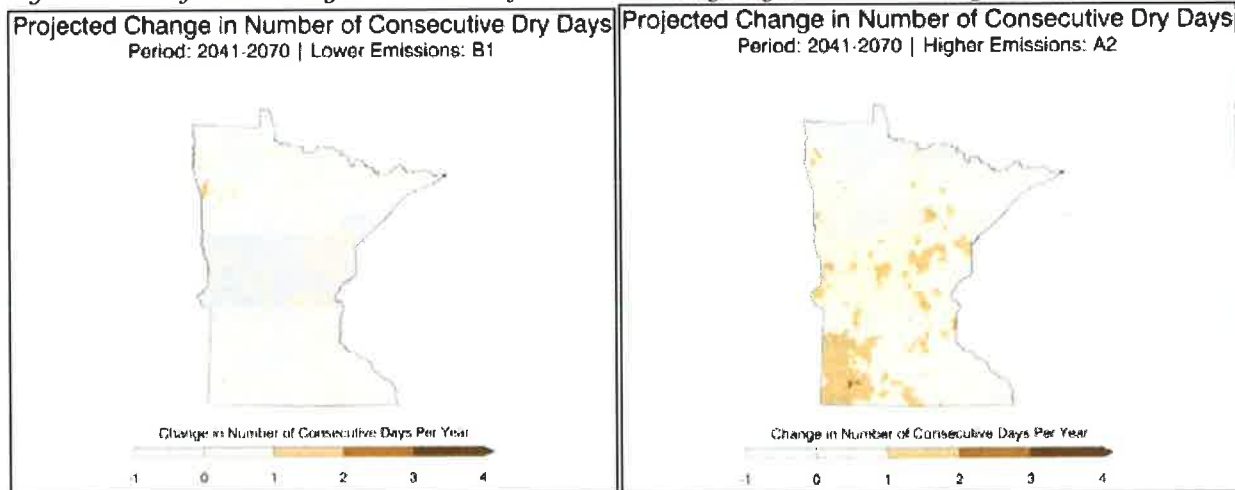
5.8.2 PROBABILITY OF OCCURRENCE

To determine the probability of future droughts in Sibley County, records of previous droughts were summed and divided by the dataset's period of record, resulting in the annual relative frequency of droughts. The USDM database was examined from January 4, 2000–September 13, 2021 for any occurrence of drought \geq D1 in Sibley County, regardless of the duration or extent of the drought. According to the weekly reported data, the relative frequency of the county experiencing drought conditions \geq D1 is 11.1 weeks per year, and the relative frequency of drought conditions \geq D2 is 5 weeks per year (NDMC et al., 2021). The relative frequency of past droughts can be used to infer the probability of similar droughts occurring in the future.

5.8.3 CLIMATE CHANGE PROJECTIONS

In 2007, 24 Minnesota counties received drought designation, while seven counties were declared flood disasters; in 2012, 55 Minnesota counties received federal drought designation at the same time 11 counties declared flood emergencies (MN EQB, 2014); and as of the writing of this plan, August 2021, 100% of Minnesota is experiencing a level of drought, with over a third of Sibley County being in a severe drought (D2) (NDMC et al., 2021). Droughts have been happening throughout Minnesota's history, but it is not yet clear the degree to which climate change may impact future droughts (Moss, 2017). While there was no apparent change in drought duration in the Midwest over the past century (Dai, 2011), the average number of days without precipitation is projected to increase in the future (USGCRP, 2018).

Figure 26. Projected change in number of consecutive dry days in low- and high-emission scenarios



SOURCE: (PRYOR ET AL., 2014)

The climate models used in the 2014 National Climate Assessment projects Minnesota to have an increase in days over 90°F by mid-century, however, the future drought situation is less clear. The climate model run with the lower-emissions scenario projects no significant change in the number of consecutive days of no rain, while the higher emissions scenario show an increase in dry periods, increasing Minnesota’s drought risk (Moss, 2017). These climate models are shown in Figure 26.

Even in areas where precipitation does not decrease, projected higher air temperatures will cause increased surface evaporation and plant water loss, leading to drier soils. As soil dries out, a larger proportion of the incoming heat from the sun goes into heating the soil and adjacent air rather than evaporating its moisture, resulting in hotter summers under drier climatic conditions (Mueller & Seneviratne, 2012).

5.8.4 VULNERABILITY

One way to identify county assets vulnerable to drought is by examining the impacts of previous droughts. Overseen by the National Drought Mitigation Center (NDMC), the Drought Impact Reporter (DIR) is a comprehensive database that gathers drought-related reports from a variety of sources and identifies the sector(s) impacted by each drought. The NDMC (NDMC et al., 2021) defines a drought impact as “[a]n observable loss or change that occurred at a specific place and time because of drought.” A drought meeting this definition is categorized based on the sector(s) the drought impacts; therefore, a single drought affecting multiple sectors will be counted once for each respective sector it impacted.

DIR records show four drought incidents impacting two categories in Sibley County. All incidents occurred between October 2003 and October 2012 and are displayed in Table 32.

Table 32. Reported drought impacts for Sibley County

Category	# of drought impacts reported
Agriculture	2
Business & Industry	0
Energy	0
Fire	0
Plants & Wildlife	0
Relief, Response & Restrictions	3
Society & Public Health	0
Tourism & Recreation	0
Water Supply & Quality	0

(NDMC ET AL., 2021)

Since droughts are regional in nature, jurisdictions within Sibley County do not vary in their vulnerability to drought; however, the impact from droughts are not equal.

Drought conditions may impact soil moisture reserves, groundwater supplies, lake levels and stream flows. Water-dependent industries that experience the greatest impacts include: agriculture, public utilities, forestry and tourism (MN DNR, 2021b). In addition, droughts may negatively affect an

individual's health by contributing to poor air quality caused by wildfire smoke and particulate, or a dusty environment. The 2021 drought resulted in elevated fire danger in roughly the northern two-thirds of the state, and record high particulate readings across Minnesota due to the Canadian wildfires (Huttner, 2021). Populations vulnerable to these conditions include children, older adults, and those with respiratory issues. The Household Composition & Disability SVI theme map is made up of these population groups and should be reviewed to better understand the vulnerability of each jurisdiction (ATSDR, 2020).

According to the DIR, Sibley County's agriculture sector has been impacted by drought more than once, and with 83% of the county's land devoted to cultivated crops and 2% to hay and pasture, the county's agriculture community is vulnerable to the economic impact a drought may have on crops. From 1989–2018, Sibley County received \$32,017,173 (2018 ADJ) in crop indemnity payments due to drought, placing it as the 16th-highest-paid county in Minnesota (CEMHS, 2019).

5.8.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified several program gaps and deficiencies that make its citizens more vulnerable to drought. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Water Conservation Provisions/Use Restrictions: Water conservation provisions and use restrictions in times of drought should be included in county or city ordinances.

5.9 Landslides

Erosion is the wearing away of land, such as the loss of a riverbank, beach, shoreline, or dune material. It is measured as the rate of change in the position or displacement of a riverbank or shoreline over a period of time. Short-term erosion typically results from periodic natural events, such as flooding, hurricanes, storm surges and windstorms, but may be intensified by human activities. Long-term erosion is a result of multi-year impacts such as repetitive flooding, wave action, sea level rise, sediment loss, subsidence, and climate change. Death and injury are not typically associated with erosion; however, major incidents of erosion, such as landslides, can destroy buildings and infrastructure (FEMA, 2013b).

The movement of a mass of rock, debris, or earth down a slope by the force of gravity is considered a landslide. They occur when the slope or soil stability changes from stable to unstable, which may be caused by earthquakes, storms, erosion, fire, or additional human-induced activities. Slopes greater than 10 degrees are more likely to slide, as are slopes where the height from the top of the slope to its toe is greater than 40 feet. Slopes are also more likely to fail if vegetative cover is low and/or soil water content is high. Potential impacts of a landslide include environmental disturbance, property and infrastructure damage, and injuries or fatalities (USGS, 2021a).

Slope materials that become saturated with water may develop a debris flow or mud flow. The resulting slurry of rock and mud may pick up trees, houses, and cars, thus blocking bridges and tributaries causing flooding along its path (USGS, 2021a).

Landslides and mudslides often occur together with other major natural disasters, thereby exacerbating relief and reconstruction efforts. Wildfires may remove vegetation from hillsides, significantly increasing runoff and landslide potential. Floods and landslides are closely related, and both involve precipitation, runoff, and ground saturation that may be the result of severe thunderstorms; however, landslides also take place over time and often take place when no natural disaster is evident.

5.9.1 HISTORY

The most significant reports of landslides impacting Sibley County occurred in June of 2014 when heavy rains caused flooding and landslides. Landslides were reported in and around the cities of Arlington and Henderson (MN DNR, 2016), and resulted in multiple road closures, damage to four homes, and the destruction of a house a mile east of the Minnesota River near Henderson, MN (Linehan, 2014). There are no other reports of landslides occurring in the county since this event.

Given the lack of data on landslide incidents in Minnesota, the locations of Best Management Practices (BMPs) reported to the MN Board of Soil and Water Resources (BWSR) were used to identify areas in the State which may be more susceptible to landslides. BMPs are ways to manage land and activities to protect water quality and promote soil conservation, they can be a structural “thing” or part of a process. The BWSR identifies five BMPs which may be implemented to mitigate against erosion and slope failure issues that may result in landslide. Descriptions of these BMPs and the number of them installed in Sibley County are in Table 33.

While BMPs are spread throughout Sibley County a greater concentration is installed in the Minnesota River Valley, with over 50% located in Jessenland and Henderson Township.

The lack of landslide data in Minnesota has prompted researchers from eight colleges and universities across Minnesota to examine the prevalence of landslides across the state and compile an inventory of geological activity. By summer 2021, this research will produce tools and data for mitigation and restoration including a landslide inventory and landslide susceptibility map (Gran, 2016).

PROBABILITY OF OCCURRENCE

The lack of landslide data makes it difficult to determine the probability of future landslides in Sibley County by reviewing historic incidents. The USGS conducted an analysis for potential landslide of the conterminous US, and while highly generalized and not intended to be used for local planning, still provides a general overview of landslide potential. The delineation process of this research is based on geologic formations of the US which were classified as having high, medium, or low landslide incidence; and being of high, medium, or low susceptibility to landslides (Radbruch-Hall et al., 1982). The research found the area in Sibley County most susceptible to landslides is along the Minnesota River Valley, being moderately susceptible to landslides and having a low count of incidents.

In addition to reviewing the USGS study the locations of installed BMPs affiliated with erosion and slope failure can be an indicator as to where these issues have happened in the past and may continue being an

issue in the future. We can infer from available data that the probability of destructive landslides occurring in susceptible areas in the county is low to moderate.

Table 33. Best Management Practices (BMP) affiliated with erosion, slope failure, and landslides

Practice Name	Code	Description	Count of practice in County
Grade Stabilization Structure	410	A structure used to control the grade and head cutting in natural or artificial channels. Includes side-inlet controls for existing drainage ditches and/or streams.	24
Streambank and Shoreline Protection	580	Treatment(s) used to stabilize and protect banks of streams or constructed channels, and shorelines of lakes, reservoirs, or estuaries.	7
Stream Channel Stabilization	584	Measures used to stabilize the bed or bottom of a channel.	0
Water and Sediment Control Basin	638	An earth embankment, or combination ridge and channel, generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin.	61

SOURCE: (MN BWSR, 2021)

CLIMATE CHANGE PROJECTIONS

The increased magnitude and frequency of flooding events and storm activity that may result from climate change may in turn increase the risk of soil erosion and landslides. According to University of Washington geologist Dave Montgomery, “If the climate changes in a way that we get a lot more rainfall you would expect to see a lot more landslides” (Phillips, 2014).

In Minnesota, the wettest days are getting wetter. This can contribute to increased erosion in many locations due to flooding and saturation of soils. Reduced ice cover on lakes and shorelines (due to warmer temperatures) could potentially expose shorelines to increased erosion or damage during weather events when they previously may have been covered with ice (Pryor et al., 2014).

According to the 2014 National Climate Assessment, “Increased precipitation intensity also increases erosion, damaging ecosystems and increasing delivery of sediment and subsequent loss of reservoir storage capacity” (Pryor et al., 2014).

VULNERABILITY

Properties, structures, and individuals located in areas susceptible to slope failure are vulnerable to landslides. Radbruch-Hall's study determined the area along the Minnesota River is at a higher risk of landslide than other areas (1982), so special attention should be given to communities along the Minnesota River.

The locations of BMPs installed to counter erosion and slope failure issues can also be considered when trying to identify areas of the county more vulnerable to landslides. Over half of the BMPs in the county have been implemented in Jessenland and Henderson Township, followed by the townships of Arlington, Faxon, and Kelso, which contain about 9%, 8%, and 8% of the county's BMPs, respectively.

Most parcels in the county on which BMPs were installed are classified as agricultural with the remaining classified as residential, and rural vacant land. Structures on these parcels may be more vulnerable to issues of erosion and landslides given the nature of the BMPs installed on the properties.

5.9.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management identified several program gaps and deficiencies that make its citizens more vulnerable to landslides. The following gaps and deficiencies should be addressed with new mitigation efforts to reduce that vulnerability:

Ravine Stabilization & Setbacks: Many slopes of concern are failing due to seepage. Sites with these issues are really tough to fix and can become difficult conversations with landowners. Stricter setbacks from these ravine areas are necessary to prevent any damage or loss of property. Some of the problem can be attributed to the natural progression of downcutting within the relatively young Minnesota River Valley.

Cost Share funding: The SWCD identifies that a lack of/reduced available cost share is a challenge to implementing issues that can be addressed with cost share funding.

5.10 Dam & Levee Failure

A dam is a structure built across a stream or river to retain water for the purpose of storage or control. The difference in elevation between the water at the top and bottom of a dam creates large amounts of potential energy, allowing the chance for failure. Dam failures are typically not caused by storm events. In the U.S., 36% of dam failures are due to mechanical reasons (malfunctioning gates, conduits, or valves); 34% are from hydraulic failures (overtopping due to inadequate spillway design, debris blockage, or the settlement of the dam crest), and 30% are caused by structural failures (foundation defects from settlement and slope instability) (FEMA, 2013c).

A levee is a structure, typically made from embankments of dirt, built along the edges of rivers and streams to contain, control, or divert the flow of water to prevent flooding of the adjacent land (Lotha et al., 2019). Common causes for levees failing include foundation failure, surface erosion, or overtopping

(USACE, 2010). Both dam and levee failures can be devastating, resulting in loss of human life, downstream property damage, lifeline disruption (transportation routes and utility lines required to maintain or protect life), and environmental damage. Dams and levees require constant monitoring and regular maintenance to ensure their integrity.

Dam & Levee Regulation: There are over 1,150 dams in Minnesota (MN DNR, 2020b). Dam regulatory authorities vary between state and federal agencies based mainly on the ownership of the dam.

The MN DNR Dam Safety Program has the mission of protecting the life and safety of people by ensuring that dams are safe. Minnesota's Dam Safety Program sets minimum standards for dams and regulates the design, construction, operation, repair, and removal of both privately and publicly (non-federal) owned dams (MN DNR, 2020b). The federal government is responsible for regulating and maintaining dam safety of federally owned dams. No single agency regulates all federally owned dams. 42% of federal dams are owned and managed by the U.S. Army Corp of Engineers (USACE) and the Bureau of Reclamation. The remaining federal dams are owned and managed by other federal agencies, including the Fish and Wildlife Service, Forest Service, the Department of Defense, and the Bureau of Indian Affairs, among others (Normand, 2019). The Federal Energy Regulatory Commission (FERC) Dam Safety Program is the largest dam safety program in the U.S. The Commission works with federal and state agencies to ensure and promote dam safety of over 3,000 dams across the U.S. The Commission inspects projects on an unscheduled basis to investigate potential dam safety problems; complaints about constructing and operating a project; safety concerns related to natural disasters; and issues concerning compliance with the term and conditions of a license (FERC, 2020).

Similar to dams, levees in Minnesota are regulated by various federal, state, and local entities that own the levee. While the USACE has designed and built many of the levees in the U.S., the USACE is only responsible for the maintenance of federally owned levees in the USACE system.

There are 10 dams and 2 levees in Sibley. Table 34 provides the properties of each dam and Table 35 lists the properties of each levee in the county.

Table 34. Dams in Sibley County

Dam Name	Owner	Waterway	Type	Height (ft)	Length (ft)	Purpose	Condition	Rating
Titlow Lake	City of Titlow	Rush River	Gravity	9	45	Other	Poor	Class III
Altnow Lake	MNDNR-Wildlife	Rush River-TR	No Data	No Data	No Data	Fish and Wildlife Pond	Satisfactory	Class III
Clear Lake	County of Sibley	JUDICIAL DITCH NO. 4A	No Data	No Data	No Data	No Data	Satisfactory	Class III
Silver Lake	MNDNR-Wildlife	High Island Creek-TR	No Data	No Data	No Data	Fish and Wildlife Pond	Satisfactory	Class III

Dam Name	Owner	Waterway	Type	Height (ft)	Length (ft)	Purpose	Condition	Rating
High Island Lake	MNDNR	High Island Creek	No Data	No Data	No Data	Fish and Wildlife Pond	Satisfactory	Class III
Ward Lake	MNDNR-Wildlife	No Data	No Data	No Data	No Data	No Data	Poor	No Data
Erin Lake	County of Sibley	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Curran Lake	MNDNR-Wildlife	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Sand Lake	MNDNR-Wildlife	Co. Ditch 5	Other, Earth	8	164	Fish and Wildlife Pond	Satisfactory	Class III
Sibley 34	Sibley-Nicollet Joint Drainage Authority	South Branch Rush River	No Data	No Data	No Data	Flood Control	No Data	Class III

SOURCES: (MN DNR, 2014; USACE, 2021)

Table 35. Levees in Sibley County

Levee Name	Location	Waterway	Length (mi)	Leveed Area (sq mi)
Henderson North Levee	City of Henderson	Minnesota River	0.924	0.106
Henderson South Levee	City of Henderson	Minnesota River	0.525	0.036

SOURCE: USACE, 2021)

5.10.1 HISTORY

According to the State Dam Safety Engineer at the MN DNR, there are two records of a dam or levee failure in Sibley County.

On June 29th of 2014, the High Island Creek failed due to persistent high water and lots of trees in the spillway. The dam has since been removed.

In March 2019, the High Island Lake Dam failed due to seepage flow under the outlet structure, and subsequent reverse flow. The dam has since been repaired (Boyle, Jason (MN Dam Safety Engineer), personal communication, October 22, 2019).

5.10.2 PROBABILITY OF OCCURRENCE

To determine the probability of future dam or levee failures in Sibley County, records of previous failures and the period in which they occurred were examined. There MN DNR has two records of dam failures occurring in the county; therefore, the relative frequency of these events is 0 per year. This relative frequency can be used to infer that the probability of dam failures occurring in the future is very low.

5.10.3 CLIMATE CHANGE PROJECTIONS

Dams are designed based on assumptions about a river’s annual flow behavior that will determine the volume of water behind the dam and flowing through the dam at any one time. Changes in weather patterns due to climate change may change the expected flow pattern, and indirectly increase the likelihood of dam failures. It is conceivable that bigger rainfalls at earlier times in the year could threaten a dam’s designed margin of safety, causing dam operators to release greater volumes of water earlier in a storm cycle in order to maintain the required margins of safety. Such early releases of increased volumes can increase flood potential downstream.

Minnesota had a dam failure due to a large storm event in June 2012. The Forebay Canal in Carlton County had operated as designed for nearly 100 years. The intensity of the 2012 rain event caused a failure of the canal wall, which caused significant damage. Climate change is adding a new level of uncertainty that needs to be considered with respect to assumptions made during dam construction.

5.10.4 VULNERABILITY

Although dam regulatory authorities differ between various federal and state agencies, all authorities attempt to classify dams according to the potential impacts from a dam failure or mis-operation. In response to the numerous classification systems, FEMA’s Interagency Committee on Dam Safety created a downstream hazard potential classification system that is adaptable to any agency’s current system. Table 36 provides an overview of the main criteria agencies consider when determining a dam’s downstream hazard potential. This classification system does not imply that the dam is unsafe, but rather categorizes dams based on the probable loss of human life and the impacts on economic, environmental, and lifeline interests (FEMA, 2004a).

Dams for which a hazard potential has not been designated, or is not provided, are classified as “Undetermined.”

An Emergency Action Plan (EAP) is a document which identifies potential emergency conditions at a dam and specifies preplanned actions to be followed during a dam failure to minimize property damage or loss of life. An EAP is required for Class I dams and strongly recommended for Class II dams (MN DNR, 2020b).

Table 36. Downstream hazard potential classification criteria

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
Class III (Low)	None expected	Low and generally limited to owner
Class II (Significant)	None expected	Yes
Class I (High)	Probable - one or more expected.	Yes (but not necessary for this classification)

SOURCE: (USACE, 2008)

Seven of the dams in Sibley County are a Class III (low hazard potential) and no hazard information is available for the other three dams. None of the dams have an Emergency Action Plan (EAP), therefore, no information is available or required about vulnerable structures or populations in the event of a failure. In addition to dams being classified by their hazard potential, the physical condition of dams is inspected and given a condition ranking. The condition of a dam is categorized into one of the following classifications:

Satisfactory: No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the applicable regulatory criteria or tolerable risk guidelines.

Fair: No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.

Poor: A dam safety deficiency is recognized for loading conditions which may realistically occur. Remedial action is necessary. "Poor" may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency. Further investigations and studies are necessary.

Unsatisfactory: A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

Not Rated: The dam has not been inspected, is not under state jurisdiction, or has been inspected but, for whatever reason, has not been rated. (USACE, 2008)

Dams in "Poor" or "Unsatisfactory" conditions may be more vulnerable to failure and pose a greater threat to the surrounding community and infrastructure. Two of the dams that have received a rating in Sibley County have been rated as "Poor." The location of levees and location and condition of dams in Sibley County are mapped in Figure 27.

Similar to dams, levees have a Levee Safety Action Classification (LSAC) "...designed to take into account the probability of the levees being loaded, existing condition of the levee, the current and future maintenance of the levee, and the consequences if a levee were to fail or be overwhelmed (USACE, 2020a).

The levees in Sibley County are used to regulate water levels and protect communities from flooding. A breached levee can have serious consequences to the community relying on the levee to hold water back. Table 37 provides a summary of the county's levees and community assets protected by the respective levee.

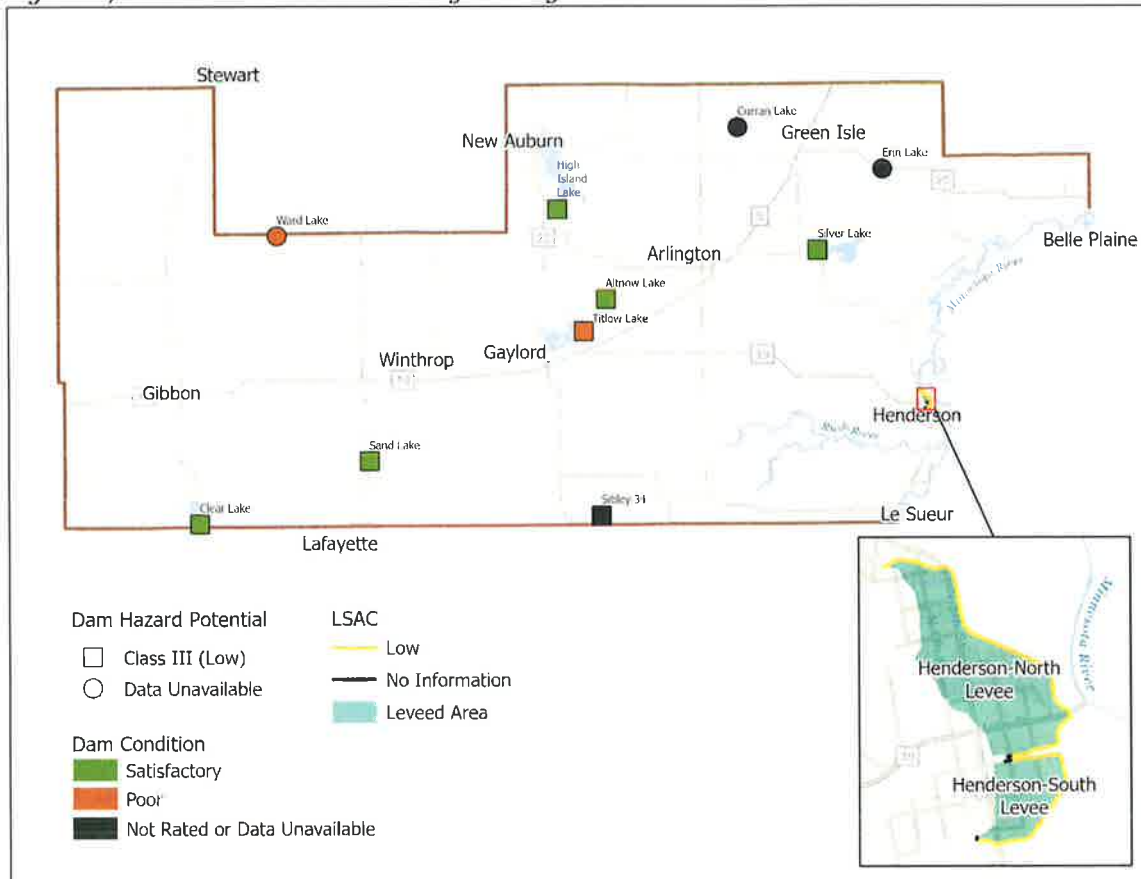
Table 38 shows the LSAC's five levels of risk, as well as the actions that should be taken at each risk level.

Table 37. Assets in leveed areas

Levee Name	Location	LSAC Rating	Property Value	Structures at Risk	Population at Risk
Henderson North Levee	Henderson City	Low	\$31,870,170	132	233
Henderson South Levee	Henderson City	Low	\$,5084,180	24	50

SOURCE: (USACE, 2020B)

Figure 27. Levees and dams in Sibley County



SOURCE: (USACE, 2021)

5.10.5 PROGRAM GAPS AND DEFICIENCIES

Sibley County Emergency Management did not identify any program gaps or deficiencies that make its citizens more vulnerable to dam and levee failure.

Table 38. USACE's Levee Safety Action Classification (LSAC) Table

Risk	Actions for Levee Systems and Leveed Areas in this Class <i>(Adapt actions to specific levee system conditions.)</i>	Risk Characteristics of this Class
Very High (1)	Based on risk drivers, take immediate action to implement interim risk reduction measures. Increase frequency of levee monitoring, communicate risk characteristics to the community within an expedited timeframe; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning systems and evacuation procedures; and, recommend purchase of flood insurance. Support risk reduction actions as very high priority.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in very high risk.
High (2)	Based on risk drivers, implement interim risk reduction measures. Increase frequency of levee monitoring, communicate risk characteristics to the community within an expedited timeframe; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning systems and evacuation procedures; and, recommend purchase of flood insurance. Support risk reduction actions as high priority.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in high risk.
Moderate (3)	Based on risk drivers, implement interim risk reduction measures as appropriate. Verify risk information is current and implement routine monitoring program; assure O&M is up to date; communicate risk characteristics to the community in a timely manner; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning systems and evacuation procedures; and, recommend purchase of flood insurance. Support risk reduction actions as a priority.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in moderate risk.
Low (4)	Verify risk information is current and implement routine monitoring program; assure O&M is up to date; communicate risk characteristics to the community as appropriate; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning systems and evacuation procedures; and, recommend purchase of flood insurance. Support risk reduction actions to further reduce risk to as low as practicable.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in low risk.
Very Low (5)	Continue to implement routine levee monitoring program, including operation and maintenance, inspections, and monitoring of risk. Communicate risk characteristics to the community as appropriate; verify emergency plans and flood inundation maps are current; ensure community is aware of flood warning and evacuation procedures; and recommend purchase of flood insurance.	Likelihood of inundation due to breach and/or system component malfunction in combination with loss of life, economic, or environmental consequences results in very low risk.
No Verdict	Not enough information is available to assign an LSAC.	

*Levee risk is the risk that exists due to the presence of the levee system, and this is the risk used to inform the decision on the LSAC assignment. The information presented in this table does not reflect the overtopping without breach risk associated with the presence or operation of the levee system.

SOURCE: (USACE, 2020A)

Section 6 – Mitigation Strategy

The goal of mitigation is to protect lives and reduce the impacts of future hazard events including property damage, disruption to local and regional economies, the amount of public and private funds spent to assist with recovery, and to build disaster-resistant communities. Mitigation actions and projects should be based on a well-constructed risk assessment, provided in Section 5 of this plan. Mitigation should be an ongoing process adapting over time to accommodate a community's needs.

6.1 Community Capability Assessments

The capability assessment identifies current activities and existing planning tools used to mitigate hazards. The capability assessment identifies the policies, regulations, procedures, programs and projects that contribute to the lessening of disaster damages. The assessment also provides an evaluation of these capabilities to determine whether the activities can be improved in order to more effectively reduce the impact of future hazard events. The following sections identify existing plans and mitigation capabilities within all of the communities:

- Appendix D: Lists the plans and programs in place in Sibley County as related to hazard mitigation.
- Appendix C: As part of the Sibley County MHMP update, the county and city governments were asked to participate in filling out a “Local Mitigation Survey” (LMS) form to report on their current mitigation capabilities and program gaps. Appendix C provides the LMS reports gathered for Sibley County.

Information from the capability assessments was used to support development of local mitigation actions for implementation over the next five years (see column *Comments on Implementation & Integration*).

6.1.1 NATIONAL FLOOD INSURANCE PROGRAM (NFIP)

The NFIP is a federal program created by Congress to mitigate future flood losses nationwide through sound, community-enforced building and zoning ordinances and to provide access to affordable, federally backed flood insurance protection for property owners. The NFIP is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the federal government that states that if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas

(SFHAs), the federal government will make flood insurance available within the community as a financial protection against flood losses.

Table 39 lists and describes jurisdictional participation in the National Flood Insurance Program (NFIP).

Table 39. NFIP participation in Sibley County

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
Sibley County	Participating	FEMA-mapped high-risk areas	Sibley County Zoning Ordinance manages the Flood Plain regulations in Section 300.6. The Ordinance also manages Special Protection Shoreland in Section 300.7, Residential-Recreational Shoreland in Section 300.8. Sibley County enforces the Shoreland Management Standards in Section 300.14.14 of the Zoning Ordinance.
Arlington	Participating	FEMA-mapped high-risk areas	The City of Arlington conducts floodplain identification and mapping, including any local requests for map updates.
Gaylord	Participating	No FEMA-mapped high-risk areas	The City of Gaylord enforces the Shoreland Overlay District ordinance in the Gaylord City Code as it relates to flood zones, mapping and other designations.
Gibbon	Not Participating	No FEMA-mapped high-risk areas	The city does not have a FEMA map and is not participating.
Green Isle	Not Participating	No FEMA-mapped high-risk areas	The city does not have a FEMA map and is not participating.
Henderson	Participating	FEMA-mapped high-risk areas	The City of Henderson enforces Chapter 9 of the Henderson City Code as it relates to flood zones, mapping and other designations.
Le Sueur	Participating	FEMA-mapped high-risk areas	The City of Le Sueur enforces Chapter 151: Flood Plain Management of the City Code within the corporate limits of the City of Le Sueur.

Community Name	Participation in the NFIP	FEMA Map	Description of Participation
New Auburn	Participating	No FEMA-mapped high-risk areas	The City of New Auburn has No Special Flood Hazard Area mapped and does not have a specific floodplain ordinance. The City participates in NFIP to allow citizens access to cheaper flood insurance if they so choose to participate in it. We also take continuing steps towards managing localized flooding events through storm water management improvements and maintenance of the existing system.
Winthrop	Participating	FEMA-mapped high-risk areas	The City of Winthrop adopted a resolution adopted regulations for participation in the NFIP on March 3, 1997. The City continues to enforce regulations to restrict development in high-risk flood areas.

SOURCE: (CEIL STRAUSS, MN FLOODPLAIN MANAGER, PERSONAL COMMUNICATION, APRIL 6, 2020)

Repetitive loss properties are defined as properties that have had two or more flood insurance claims of \$1,000 or more in any rolling 10-year period. Property owners are asked to consider mitigation activities such as acquisition, relocation, or elevation, among other options. FEMA’s Repetitive Loss (RL) properties strategy is to eliminate or reduce the damage to property and the disruption to life caused by repeated flooding of the same properties. Property owners are notified of their status by FEMA.

There are no RL properties in Sibley County. For more on the areas that flood repeatedly in Sibley County, see Section 5.1.

6.1.2 PLANS AND ORDINANCES

Sibley County and its incorporated communities have a number of plans and ordinances in place to ensure the safety of residents and the effective operation of communities including a Zoning Ordinance, Floodplain Ordinance, Emergency Operations Plan, and Wellhead Protection Plan.

6.1.3 PLANS AND PROGRAMS IN PLACE TO ADDRESS NATURAL HAZARDS

Sibley County has numerous plans and programs in place to address natural hazards. Some of these programs are specific to a hazard and others address impacts and human safety for many types of events (“All-Hazards”). For the purpose of grouping related natural hazards, “Summer Storms” encompasses

Tornadoes, Windstorms, Lightning, and Hail. Following is a description of the plans and programs in place by Sibley County to support mitigation for the hazards addressed in this plan.

All Hazards

All Hazards Emergency Operations Plan: Sibley County Emergency Management maintains an All-Hazards Emergency Operations Plan which details key emergency management functions (i.e., Public Information and Warning, Evacuation, Mass Care Sheltering, etc.) that may be necessary in advance of, during and following hazard events that pose risk to life safety. This includes events such as severe summer and winter storms, tornadoes, extreme temperatures, flooding, and wildfire.

Public Warning and Emergency Notification: In the event of emergencies or hazardous conditions that require timely and targeted communication to the public, Sibley County utilizes the CodeRED emergency notification system which users must sign up for (“opt-in service”). Sibley County also has IPAWS (Integrated Public Alert Warning System) which allows for both targeted and county-wide emergency notifications to both residents and visitors (not an “opt-in” service). Severe spring and summer storm warnings are initiated by the National Weather Service or by local trained SkyWarn spotters. Extreme cold temperature warnings and extreme heat warnings, and winter weather warnings are issued by the National Weather Service. Residents receive warnings by NOAA weather radio, local media, CodeRED, cell phone apps and the outdoor warning siren system.

Preparedness Outreach: Sibley County Emergency Management utilizes our Emergency Management website, Sheriff’s Office Facebook page and local news media to communicate with residents and visitors on emergency preparedness. A link for the CodeRED emergency notification system is located on the Sibley County website.

Shelter Facilities: There are five designated shelter facilities within Sibley County that have an MOU with the American Red Cross. A severe storm or a period of extreme heat/cold coupled with a major power outage may require emergency sheltering for those in need. Sibley County Emergency Management and Public Health Department maintain a list of shelters within the county and have trained staff for shelter operations. Sibley County has Sheltering and Pet Sheltering Plans in place.

NOAA Weather Radios: Sibley County Emergency Management promotes the use of NOAA weather radios by schools, long-term care facilities, county buildings, local residents, and visitors to receive information broadcast from the National Weather Service. We promote use of these radios in advance of and during our severe weather months using our Sheriff’s Office social media and also during the NWS severe weather awareness weeks.

Backup Power: Generator back-up power is in place for the Sibley County EOC, Courthouse, Jail, Sheriff's Office and Dispatch.

School Closings: All school districts within Sibley County have a school closing policy and communications plan in place if inclement weather or other event creates a hazardous situation for students or staff.

Severe Winter Storms

Winter Hazard Awareness Week: Sibley County Emergency Management helps promote and participates in the National Weather Service's "Winter Hazard Awareness Week" held in November each year. The event provides education to residents on the dangers of winter weather and how to properly deal with it. We utilize our Emergency Management Facebook page and local news media to share information with the public.

Snow Removal: The Sibley County Public Works Department is responsible for the removal of snow and ice from county roads, as well as some township roads and city streets based on interagency agreements. The department completes its snow removal process in accordance with the Sibley County Public Works Department Snow Removal Policy. MnDOT removes snow from State Highways as well as disperses salt/sand as needed.

Severe Summer Storms

Outdoor Warning Sirens: There are 11 outdoor warning sirens located in Sibley County. Sirens are activated when the National Weather Service notifies Dispatch of high winds or tornado conditions that pose a risk to the public. Warning sirens are owned by the cities where they are located and maintained by those jurisdictions. All sirens are remotely activated by the Sibley County Sheriff's Office.

SKYWARN Program: Sibley County Emergency Management works with the National Weather Service to offer training on an annual basis to local fire and law enforcement departments and local residents that wish to be trained as volunteers. SkyWarn Spotters help to keep their local communities safe by providing timely and accurate reports of severe weather to their local National Weather Service office.

Severe Weather Awareness Week: Sibley County Emergency Management helps promote and participates in the National Weather Service's "Severe Weather Awareness Week" held in April each year. The week-long event seeks to educate residents on the dangers of severe storms and highlights the importance of preparing for severe weather before it strikes. We utilize our Emergency Management Facebook page and local news media to share information with the public.

Tree Management: The Sibley County Highway Department actively clears trees on the right-of-way of county-owned roads and parks to reduce the danger of trees falling on roads during severe storm events such as thunderstorms, straight-line winds or ice storms. Local road authorizes are encouraged to do the same. Sibley County Highway Department is responsible for tree removal in the county park system. The emerald ash borer has been discovered in the county and a plan should be developed or created to reduce the impacts to the trees in the park system.

MDH Requirements for Manufactured Home Parks (MHPs): The Minnesota Department of Health (MDH) Regional Office in Mankato works with the owners of manufactured home parks within the County to ensure that they are meeting Minnesota Department of Health (MDH) requirements for storm shelters and evacuation plans. Shelter and evacuation plans must be approved by the municipality in which they are located and submitted to MDH.

Flooding

Floodplain Mapping & Ordinance: Sibley County's Planning & Zoning Department maintains the floodplain maps and floodplain management ordinance for the county.

National Flood Insurance Program (NFIP): Sibley County and the cities of Arlington, Gaylord, Henderson, New Auburn, and Winthrop participate in the NFIP. The cities of Gibbon and Green Isle do not have FEMA-Mapped High-Risk Areas participate and do not participate in the NFIP.

Sibley County Floodplain Management: The Sibley County Planning and Zoning Office is the repository for the National Flood Insurance Program's Flood Insurance Rate Maps (FIRM), as well as flood boundary and floodway maps for rural Sibley County. The Planning and Zoning Office can assist county residents in determining whether their property is affected by an officially mapped flood area. Flood Insurance Rate Maps are available on the Planning & Zoning website for all Sibley County townships.

Transportation Improvement Plan: Sibley County Highway Department maintains an annual Transportation Improvement Plan (TIP) that identifies and schedules road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding. The current Sibley County TIP is in place for 2019–2023. The transportation plan will be updated for 2021–2025.

Sibley County Floodplain & Shoreland Ordinances: The Sibley County Zoning Department administers land use and zoning ordinances for rural and unincorporated portions of Sibley County, including for floodplains and shoreland. The department also provides information and support for environmental health issues that may impact water quality after flooding occurs. Sibley County "County-Wide" Zoning Ordinance addresses Shoreland Management Regulations including building regulations to mitigate against flooding during high-water elevation (for structures along lakes, ponds, flowages, rivers, and streams).

Stormwater Management Ordinance & Plans: Sibley County Zoning Ordinance Article 300 addresses Stormwater Management for the County.

Enforcement of MPCA Stormwater Standards for New Development: New residential and commercial development is required to meet MPCA stormwater standards and are required to obtain and National Pollutant Discharge Elimination System (NPDES) and the County requires a copy of this before approvals are granted. All the townships have drainage standards that meet or exceed the required rainfall events. Each project has to provide the County with a Storm water Pollution Prevention Plan (SWPPP) before the County grants approval through the platting process. The County keeps employees on staff that are qualified through training to review these plans.

Sibley County Drainage Administration: Sibley County has a Drainage Administrator and a Ditch Inspector that oversee management of 550 miles of open ditches and 150 of miles of underground tile in Sibley County, consisting of over 85 drainage systems. Private landowners with property that adjoin county ditches are encouraged to help keep them free and clear of debris.

Sibley County Soil and Water Conservation District: The Sibley County Soil & Water Conservation District provides access to natural resource management and conservation services and provides technical, financial, and educational assistance to landowners to address natural resource concerns, including those associated with flooding.

Extreme Cold

Extreme Cold Safety Awareness: Sibley County Emergency Management and Public Health promote public awareness of personal safety measure to take during periods of extreme cold, such as minimizing exposure and being prepared with survival kits in vehicles during winter.

Extreme Heat

Extreme Heat Safety Awareness: Sibley County Emergency Management and Public Health promote public awareness of personal safety measure to take during periods of extreme heat, such as minimizing exposure and staying hydrated.

Drought

Sibley County Water Plan: The Sibley County Water Plan describes both surface and groundwater quantities and quality. It also addresses the county's water needs and concerns. The plan was adopted in 2013 and will be effective until 2023.

Public Awareness: In the event of drought conditions, Sibley County Emergency Management works in concert with the NWS and MN DNR to raise public awareness of the dry conditions and increased danger of wildfire.

Sibley County Soil and Water Conservation District: The Sibley County Soil & Water Conservation District provides access to natural resource management and conservation services and provides technical, financial, and educational assistance to landowners to address natural resource concerns, including those associated with drought.

Landslides

Buffer Ordinance: Sibley County Article 330 “Buffer Ordinance” is established to provide for riparian vegetated buffers and water quality practices to achieve the following purposes: (a) Protect state water resources from erosion and runoff pollution; (b) Stabilize soils, shores and banks; and (c) Protect or provide riparian corridors.

Sibley County Soil and Water Conservation District: The Sibley County Soil & Water Conservation District provides access to natural resource management and conservation services and provides technical, financial, and educational assistance to landowners to address natural resource concerns. The SWCD manages a Cost Share Program to fund practices for erosion control, sedimentation control, or water quality improvements designed to protect and improve soil and water resources. Projects that may be eligible for cost-share funding include: Grade stabilization structures, cover crops, wetland restorations, drainage water management systems, no-till/strip till, Critical Area Planting, Diversions, Grassed Waterway, Livestock Waste Management, Filter Strips, Sediment Basins, Streambank and Shoreline Protection, Stripcropping, and Forestry Conservation Practice.

Dam Failure

None.

6.2 Mitigation Goals

The goals and strategies for natural hazards in the 2019 Minnesota State Hazard Mitigation Plan were adopted for use in the Sibley County Plan. This framework, as outlined below, will allow for integration of the mitigation actions that are listed by Sibley County and its jurisdictions into the state plan. The state will then be able to develop a statewide strategy that will benefit all of Minnesota.

Flooding Goal: Reduce deaths, injuries, property loss and economic disruption due to all types of flooding (riverine, flash, coastal, dam/levee failure).

Wildfire Goal: Reduce deaths, injuries, property loss, natural resource and economic disruption due to wildfires (forest, prairie, grass, and peat bogs).

Windstorms Goal: Reduce deaths, injuries, property loss, and economic disruption due to windstorms.

Hail Goal: Reduce deaths, injuries, property damage, and economic disruption due to hailstorms.

Winter Storms Goal: Reduce deaths, injuries, property loss, and economic disruption due to winter storms (blizzard, ice, and ice storm).

Lightning Goal: Reduce deaths, injuries, property losses, loss of services, and economic disruption due to lightning.

Tornado Goal: Reduce deaths, injuries, property loss, and economic disruption due to tornadoes.

Drought Goal: Reduce economic loss and environmental impacts due to drought.

Extreme Heat Goal: Reduce deaths, injuries, and economic disruption due to extreme heat.

Extreme Cold Goal: Reduce deaths, injuries, and economic disruption due to extreme cold.

Dam/Levee Failure Goal: Reduce deaths, injuries, property loss, natural resource and economic disruption due to dam/levee failure.

Erosion/Landslide/Mudslide Goal: Reduce deaths, injuries, property loss, and economic disruption due to hillside, coastal, bluff: caused primarily by oversaturation of soil.

6.3 Mitigation Action and Project Strategies

The mitigation actions in this plan are summarized into four main strategy types, as described in the FEMA publications *Local Mitigation Planning Handbook* (2013) and *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (2013). A fifth strategy type was determined by Minnesota HSEM for use within the state: Mitigation Preparedness and Response. The strategies and example actions are listed in Table 40.

Table 40. Mitigation strategies and action types

Mitigation Strategy	Description	Example Mitigation Actions
Local Plans and Regulations	These actions include government authorities, policies, or codes, that influence the way land and buildings are developed and built.	<ul style="list-style-type: none">• Comprehensive plans• Land use ordinances• Planning and zoning• Building codes and enforcement• Floodplain ordinances• NFIP Community Rating System• Capital improvement programs• Open space preservation

Mitigation Strategy	Description	Example Mitigation Actions
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.</p>	<ul style="list-style-type: none"> • Shoreline codes • Stormwater management regulations and master plans • Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls • Detention and retention structures • Culverts • Safe rooms
Natural Systems Protection	<p>These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> • Sediment and erosion control • Stream corridor restoration • Forest management • Conservation easements • Wetland restoration and preservation
Education and Awareness Programs	<p>These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions.</p>	<ul style="list-style-type: none"> • Radio or television spots • Websites with maps and information • Real estate disclosure • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas. • StormReady Certification • Firewise Communities
Mitigation Preparedness and Response	<p>This is a State of Minnesota mitigation strategy with the intent of covering preparation and actions that protect life and property during a natural disaster.</p>	<ul style="list-style-type: none"> • Emergency operations plan • Flood fight plans and preparedness • Dam emergency action plans • Warning

Mitigation Strategy	Description	Example Mitigation Actions
		<ul style="list-style-type: none"> • Backup power • Emergency capabilities

Local leaders work together with the Sibley County emergency management director to assure that the hazards and mitigation actions included in this plan are accurate and addressed in their jurisdictions. Development of mitigation actions for the county and each city was informed by a community’s hazard and risk assessment; identification of local vulnerabilities, and review of capabilities in place to address mitigation. Planning team members, local elected officials and staff from Sibley County and each city actively participated in the development and review of mitigation action charts for implementation through participation in planning team meetings (see Appendix F) and development of Local Mitigation Surveys (see Appendix C). Additional jurisdictional and public feedback was incorporated following news releases inviting public input to the planning process (see Appendix G).

The Sibley County risks and mitigation activities identified also incorporate the concerns and needs of townships, school districts, and other entities participating in this plan. Appendix J contains the jurisdictional mitigation action charts for the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, New Auburn, and Winthrop.

Following is an overview the mitigation action charts and description of each element of the chart.

Number (#)

Each mitigation action is identified by a number.

Hazard

Each mitigation action is identified by the natural hazard that it relates to. Actions that fall under “All-Hazards” relate to both natural and non-natural hazards.

Mitigation Strategy

Each mitigation action is identified by one of the following five mitigation strategies.

- Local Planning and Regulations
- Structure and Infrastructure Projects
- Natural Systems Protection
- Education and Awareness Programs
- Mitigation Preparedness and Response Support

See Table 40 for a description of each mitigation strategy and related types of actions.

Mitigation Action

Each mitigation action provides a concise, action-oriented description of the action or project to be undertaken. If a mitigation reduces risk to new or existing buildings/infrastructure it is noted.

Status

The status of each mitigation action is indicated by one of the following categories:

- New – New actions that have been identified since the last plan.
- Existing – Actions that are carried over from the last plan or have been updated.
- In Progress – Actions from the last plan that are currently being acted upon.

Mitigation actions that have been completed or deleted from the 2015 Sibley County Multi-Hazard Mitigation Plan are identified and reported on in Appendix H. Completed and deleted mitigation actions are not carried over into the updated mitigation action chart.

Priority

In the review and discussion of selected mitigation strategies and actions, the planning team ranked of mitigation actions by priority for implementation. Table 41 provides criteria that were taken into consideration in the process.

Table 41. Criteria for Mitigation Action Priority Ranking

Ranking	Criteria
High Priority	<ul style="list-style-type: none">• Methods for reducing risk from the hazard are technically reliable.• The County has experience in implementing mitigation measures.• Mitigation measures are eligible under federal grant programs.• There are multiple mitigation measures for the hazard.• The mitigation measure(s) are known to be cost effective.• The mitigation measures protect lives and property for a long period of time, or are permanent risk reduction solutions.
Moderate Priority	<ul style="list-style-type: none">• Mitigation methods are established.• The County has limited experience with the kinds of measures that may be appropriate to mitigate the hazard.• Some mitigation measures are eligible for federal grants.• There is a limited range of effective mitigation measures for the hazard.• Mitigation measures are cost-effective only in limited circumstances.• Mitigation measures are effective for a reasonable period of time.
Low Priority	<ul style="list-style-type: none">• Methods for reducing risk from the hazard are not well-established, are not proven reliable, or are experimental.• The State or Counties have little or no experience in implementing mitigation measures, and/or no technical knowledge of them.• Mitigation measures are ineligible under federal grant programs.

Ranking	Criteria
	<ul style="list-style-type: none"> • There is a very limited range of mitigation measures for the hazard, usually only one feasible alternative. • The mitigation measure(s) have not been proven cost effective and are likely to be very expensive compared to the magnitude of the hazard. • The long-term effectiveness of the measure is not known or is known to be relatively poor.

Timeframe

Each mitigation action identifies the anticipated timeframe for implementation of the action within the next five-year planning cycle.

- Ongoing – Implementation of the action will require continued application.
- Defined (year) – Implementation of the action will occur within a defined time frame that is noted.
- TBD – The anticipated time frame for implementation of an action is to be determined.

Responsibility

Each mitigation action identifies what personnel, department or agency will be lead for the administration or implementation of the action.

Comments on Implementation & Integration

Each mitigation action provides a description of how the jurisdiction will work to implement the mitigation action and incorporate the activity into other existing planning mechanisms.

Possible Funding

Each mitigation action identifies where potential funding may come from to support implementation of the mitigation activity, such as existing county or city funding, state or federal funding. Projects that may be eligible for future FEMA Hazard Mitigation Assistance grant funding are noted.

The Sibley County Mitigation Action Chart is provided in Table 42.

Appendix J provides the mitigation action charts developed for each city participating in the MHMP update.

Table 42. Sibley County Mitigation Action Chart (2021–2026)

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All Hazards	Education & Awareness Programs	Encourage all county residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High Ongoing	Sibley County Emergency Management (SCEM)	A link for the county's CodeRED emergency notification system is located on the Sibley County website Emergency Management page. We also utilize the Sibley County Sheriff's Office Facebook page to post reminders to sign up. Local jurisdictions are encouraged to promote sign up for local residents by directing them to the county website.	County
2	All Hazards	Mitigation Preparedness & Response Support	Ensure the Sibley County Emergency Operations Plan (EOP) is updated and addresses policies & procedures needed to support EM functions prior to, during, and following a disaster.	Existing Moderate Ongoing	SCEM	SCEM has an Emergency Operations Plan that is updated on a regular basis which helps the county be ready to respond to disasters across a range of EM functions. This includes plans in place for Sheltering and Pet Sheltering in the event that people are displaced from their homes following a disaster.	County
3	All Hazards	Mitigation Preparedness & Response Support	Ensure designated facilities are in place and prepared for providing mass care sheltering and county staff are trained in sheltering operations.	Existing Moderate Ongoing	SCEM, SC Public Health (SCPH)	There are 5 designated shelter facilities within Sibley County that have an MOU with the American Red Cross. SCEM and SCPH maintain a list of shelters within the county and have trained staff for shelter operations. Sibley County will continue to work to ensure that all designated shelters are prepared with backup generators where needed.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
4	Severe Winter & Summer Storms & Extreme Temps	Education & Awareness Programs	Provide education and outreach to residents on personal preparedness for severe weather events, extreme temperatures, and extended power outages.	Existing High Ongoing	SCEM in coord with SCPH and Local Gov't	The SCEM website provides an extensive list of resources for residents on severe weather awareness and safety. SCEM participates in and promotes the NWS Severe Weather Awareness Weeks in spring and fall each year. We also promote residents to be prepared for emergencies, to have NOAA weather radios, and to sign up for the county's CodeRED system and social media to receive emergency notifications and other information. SCEM and SCPH promote public awareness of personal safety measures to take during periods of extreme cold or extreme heat.	County
5	Severe Winter & Summer Storms	Structure & Infrastructure Systems	Work with municipal & rural electric coops to encourage them to address burying powerlines or strengthening power poles to avoid power outages from high wind events and storms.	Existing High Ongoing	SCEM in coord with Local Gov't and Rural & Municipal Utility Coops	McLeod County Coop, MN Valley Electric, Brown County REA, and Benco Electric, and Xcel Energy each continue to address where power lines can be strengthened or buried underground. SCEM will assist as needed with applications to FEMA for eligible project measures that help to eliminate or reduce risk of power outages by these coops. Generator back-up power is in place for the Sibley County EOC, Courthouse, Jail, Sheriff's Office and Dispatch. Other county facilities may need generator backup power. In addition, not all of our designated shelter facilities have generator back-up power to provide either heat or cooling if there is a loss of power. SCEM will work with other county departments to identify what county facilities do not have backup generator power. Generators will be purchased as funding allows.	Electric Coops, FEMA HMA grant
6	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase & install permanent backup generators for Sibley County critical facilities where they are needed.	Existing High TBD	SCEM in coord with other county depts.		County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Work with local jurisdictions to acquire generator backup power to support critical infrastructure and delivery of essential services during an extended power outage due to storms.	Existing Moderate Ongoing	SCEM in coord with Local Gov't	SCEM continues to provide assistance to cities and townships that need to acquire portable generators to power infrastructure such as lift stations and other key facilities such as City Hall /community shelters in the event of a power outage. In some cases, this may include helping to identify where used portable generators may be obtained or helping to prepare a funding application. SC Public Works and local utility providers actively maintain and clear their right of ways of trees, vegetation, and debris to prevent the creation of additional hazards or blocking road/site access. Townships & cities are encouraged to do the same for roads under their authority.	County, Local Gov't
8	Severe Winter & Summer Storms	Natural Systems Protection	Conduct vegetation management along county-owned roads to reduce the risk of downed trees and branches resulting from severe storms.	Existing Moderate Ongoing	SC Public Works, Utility Providers & Local Gov't's		County, Utilities, Local Gov't
9	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Encourage schools and long-term facilities that house senior citizens or other vulnerable populations to have emergency plans and generators in place to deal with severe weather, extreme temperatures, and power outages.	Existing High Ongoing	SCEM & SCPH in coord with Schools & Other Facilities, and Local Gov't's	SCEM & SCPH continue to work with schools and other long-term care facilities across the county and will encourage them to have plans in place for when the need arises. SCEM encourages local jurisdictions to work directly with facilities in their community to be prepared. Schools are encouraged to practice tornado drills each year.	County, Local Facilities
10	Severe Summer Storms	Mitigation Preparedness & Response Support	Ensure there is a network of trained Storm Spotters throughout the county.	New Moderate Ongoing	SCEM in coord with NWS & Local Gov't	SCEM works with the NWS to provide SKYWARN storm spotter training on an annual basis to local law enforcement, fire departments, and local residents who wish to participate. Storm Spotters help to support situational awareness of and public notification for dangerous storms such as severe thunderstorms and tornadoes.	County, NWS

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
11	Severe Winter Storms	Natural Systems Protection	Work with MnDOT and the Sibley County SWCD on the planting of living snow fences along high-drift road corridors. Conduct public outreach & education during tornado season to inform the public on what is a tornado watch/warning and what to do when warning sirens are activated	New Moderate TBD	SCEM, SC Public Works in coord with MnDOT and SC SWCD	SCEM and SC Public Works Dept. will seek to work with MnDOT, the SWCD, and willing landowners to plant living snow fences on high-drift snow corridors to help improve safety for motorists during winter storms. SCEM provides information on tornado awareness and safety on the EM website, and also posts information during tornado season and during the NWS Severe Weather Awareness Week in April each year using the Sibley County Facebook and Twitter pages to keep the public informed and prepared.	County, State, SWCD
12	Severe Summer Storms	Education & Awareness Programs	Work with owners of mobile home parks (MHP's) to ensure they are in compliance with the Minnesota Department of Health (MDH) requirements for evacuation plans and storm shelters.	Existing High Ongoing	SCEM	SC Public Health works with the owners of manufactured home parks within the county and the municipalities where they are located to ensure that they are meeting MDH requirements for storm shelters and evacuation plans.	County
13	Severe Summer Storms	Local Planning & Regulations	Provide assistance to local jurisdictions that require purchase & installation of new outdoor warning sirens and ensure they are connected to the county's remote activation system.	Existing High Ongoing	SCPH in coord with Local Gov't and MHP's	The cities of Gaylord and Gibbon have identified a need for new warning sirens in their community. A future siren may also be warranted for a portion of Jessenland Township near HWY 25 and CR 14 that has a rural housing development. SCEM will assist as needed with applying for funding to the USDA Community Facilities Grant Program which is a source for funding outdoor warning sirens. All new sirens in the county will be connected to the county's remote activation system.	County, MHP Owners
14	Severe Summer Storms	Structure & Infrastructure Projects	Provide assistance to local jurisdictions that require purchase & installation of new outdoor warning sirens and ensure they are connected to the county's remote activation system.	Existing High Ongoing	SCEM in coord with Local Gov't	The cities of Gaylord and Gibbon have identified a need for new warning sirens in their community. A future siren may also be warranted for a portion of Jessenland Township near HWY 25 and CR 14 that has a rural housing development. SCEM will assist as needed with applying for funding to the USDA Community Facilities Grant Program which is a source for funding outdoor warning sirens. All new sirens in the county will be connected to the county's remote activation system.	County, Local Gov't, USDA CF Grant Program

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
15	Severe Summer Storms	Structure & Infrastructure Projects	Address the need for emergency sirens and electrical power sources at County Parks to provide notification of weather events.	New High TBD	SCEM, SC Parks Dept., and SC Public Works	Sibley County plans to install outdoor warning sirens for all 3 county parks (Clear Lake Park, High Island Creek Park and Rush River Park). The county parks do not currently have sirens. New sirens will be connected to the county's automated activation system. USDA grant funding may be sought for purchase of sirens. The Sibley County Parks and Recreation Department desires to reconstruct storm shelter-rated facilities as it replaces restrooms and comfort stations within the park system. Priorities will be given to parks with campground facilities. Specifically, Rush River County Park, Clear Lake County Park, and High Island County Park, as they have RV and tent campers that are vulnerable to severe weather events such as high winds and damaging hail and thunderstorms. The campgrounds do not have an official storm shelter or tornado safe room.	County, USDA CF Grant Program
16	Severe Summer Storms	Structure & Infrastructure Projects	Address the need for the construction of storm shelters or tornado safe rooms in Sibley County parks and local community locations where people are vulnerable to high wind or tornadic events.	Existing High Ongoing	SCEM in coord with Local Gov't	In addition, the cities of Gaylord, Gibbon, Le Sueur, New Auburn, and Winthrop have each identified a need for either a storm shelter or tornado safe room to help protect residents/visitors that are vulnerable to high wind events (i.e., mobile home parks, campgrounds). SCEM will provide assistance as requested to these municipalities to help assess need, possible construction options, and development of potential grant applications as needed (i.e., FEMA HMA safe room grant).	County, FEMA HMA, Other (TBD)

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
17	Drought	Local Planning & Education	Work in partnership with other agencies and local communities to implement measures identified in the Sibley County Comprehensive Local Water Management Plan (2013-2023).	In-Progress Moderate Ongoing	SC Property Assessing & Zoning Dept. in coord with SC SWCD	The Sibley County Comprehensive Local Water Management Plan identifies goals and actions that improve water quality and quantity and related resource management and planning in Sibley County. The county works with the SWCD and other agency partners in implementation of activities that help to mitigate against erosion and flooding impacts.	County
18	Drought	Local Planning & Regulations	Encourage water conservation provisions and use restrictions during periods of severe drought (i.e.; watering lawns).	Existing Low Ongoing	SCEM, SC Property Assessing & Zoning Dept. in coord with Local Gov'ts	During times of drought, Sibley County will work to promote drought awareness and water conservation strategies. Local governments would be encouraged to do the same or to utilize local ordinances to enforce restrictions.	County, Local Gov't
19	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program and enforce policies that address development in high-risk flood areas.	Existing Moderate Ongoing	SC Property Assessing & Zoning Dept.	The Sibley County Property Assessing & Zoning Department oversees the county's participation in the NFIP. Sibley County Zoning Ordinance manages the Flood Plain regulations in Section 300.6. The Ordinance also manages Special Protection Shoreland in Section 300-7, Residential-Recreational Shoreland in Section 300.8. Sibley County enforces the Shoreland Management Standards in Section 300.14.14 of the Zoning Ordinance.	County

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
20	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Address road improvements, ditch maintenance, and bank stabilization projects needed to mitigate against high rain events.	Existing High Ongoing	SC Public Works in coord with Local Gov'ts	<p>SC Public Works Dept. maintains an annual Transportation Improvement Plan (TIP) that identifies and schedules road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding. The current Sibley County TIP is in place for 2019-2023. The transportation plan will be updated for 2021-2025. The PW Dept. works regularly with township governments to address mitigation measures for rural roads and culverts impacted by high rain and flooding events.</p> <p>Sibley County Zoning Ordinance Article 300 addresses Stormwater Management for the County. The ordinance includes building regulations to mitigate against flooding during high-water elevation (for structures along lakes, ponds, flowages, rivers, and streams). Sibley County further enforces MPCA stormwater standards for new development and requires that a Stormwater Pollution Prevention Plan be submitted before the county approves the platting process. The SC SWCD also enforces Minnesota's Buffer Law, which requires perennial vegetative buffers of up to 50 feet along lakes, rivers, and streams and buffers of 16.5 feet along ditches.</p>	County, State, Federal
21	Flooding	Local Planning & Regulations	Enforce county policies that regulate zoning for new development, setbacks in shoreline areas, and stormwater management.	Existing Moderate Ongoing	SC Property Assessing & Zoning Dept. in coord with SWCD	<p>Sibley County Zoning Ordinance Article 300 addresses Stormwater Management for the County. The ordinance includes building regulations to mitigate against flooding during high-water elevation (for structures along lakes, ponds, flowages, rivers, and streams). Sibley County further enforces MPCA stormwater standards for new development and requires that a Stormwater Pollution Prevention Plan be submitted before the county approves the platting process. The SC SWCD also enforces Minnesota's Buffer Law, which requires perennial vegetative buffers of up to 50 feet along lakes, rivers, and streams and buffers of 16.5 feet along ditches.</p>	County, SWCD
22	Flooding	Education & Awareness Programs	Provide planning support and technical assistance to cities and townships to update stormwater management plans and implement projects that protect critical infrastructure from future flood events and improve drainage.	Existing Moderate Ongoing	SC Public Works in coord with Local Gov't's	<p>SC Public Works continues to work with our city and townships to plan for and implement local stormwater management improvements in order to better handle future high rain events. We also assist with issues related to ditch maintenance and drainage.</p>	County, Local Gov't

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
23	Flooding	Mitigation Preparedness & Response Support	Be prepared for future flood events with flood fight plans, evacuation & sheltering plans, and access to water pumps and sandbags. Work in partnership with area partners to coordinate planning and project efforts that address flooding and erosion concerns within the Lower Minnesota River West watershed.	Existing High Ongoing	SCEM in coord with SC Public Works Dept.	This is an ongoing effort of SCEM emergency response planning for flood disasters in coordination with our local jurisdictions and our neighboring jurisdictions in HSEM Region 5.	County
24	Flooding	Local Planning & Regulations		Existing Moderate Ongoing	SC Property Assessing & Zoning Dept.in coord with SC SWCD	Sibley County and the Sibley County SWCD participate in the One Watershed, One Plan for the region (1W1P – Lower Minnesota River West). Sibley County has identified the following areas of concern for potential property acquisition/relocation projects	County, SWCD Cost Share Grant Program
25	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Conduct property buyouts to acquire homes affected by repetitive flooding and physically relocate or remove those homes to eliminate future flood damages.	Existing High Ongoing	SCEM, SC Property Assessing & Zoning Dept.	<ul style="list-style-type: none"> Properties located along TH93 and CSAH 6 due to flooding along the Minnesota River. Homes along 308th Lane should be considered for relocation due to frequent flooding along the Rush River and Minnesota River. Homes along CSAH 6 should be considered for relocation due to frequent flooding along Minnesota River. <p>SCEM and SC Property Assessing & Zoning Dept. will continue to evaluate these and other future property acquisition projects and application to FEMA or MN DNR for grant funding to conduct buyouts.</p>	County, MN DNR, FEMA HMA, Local Gov't

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
26	Flooding	Local Planning & Regulations	Evaluate ditch slopes and determine the need for 2 stages ditches or other slope repairs due to increased rainfall events and erosion issues.	Existing Moderate Ongoing	SC Public Works Dept.	Sibley County Public Works Dept. includes a Drainage Administrator and a Ditch Inspector that oversee management of 550 miles of open ditches and 150 of miles of underground tile in Sibley County, consisting of over 85 drainage systems. The drainage systems within Sibley County are too small and are experiencing large amounts of damage during large flood events. Improvements such as storage and expansion of the drainage system are needed to meet the large rainfall events associated with climate change. Work to address these issues continues to be under the oversight of Sibley County Public Works and is reviewed and addressed on an annual basis.	County
27	Flooding	Local Planning & Regulations	Improve the county drainage system and develop water storage areas in order to better handle high rain and flood events and reduce damages.	Existing Moderate Ongoing	SC Public Works Dept.		County
28	Landslides	Local Planning & Regulations / Natural Systems Protection	Identify and address areas of erosion / landslide potential in the county that pose risk to homes or adjacent roadways.	Existing High Ongoing	SC Public Works, SC Property Assessing & Zoning Dept. in coord with SWCD and Local Govt's	Sibley County will continue to work with the SWCD to identify where there are slopes that are eroding or are in danger of failing due to drainage issues. Stricter setbacks from these ravine areas may be necessary to prevent any damage or loss of property for future development. The county will also work with any local jurisdictions that experience localized erosion issues that may turn into a landslide risk.	County, SWCD

Section 7 – Plan Maintenance

7.1 Monitoring, Evaluation, and Updating the Plan

The Sibley County Multi-Hazard Mitigation Plan should be considered a living document. The plan should be updated and approved by FEMA at a minimum of every five years. The guidance in this section will function as the primary tool when reviewing progress on the implementation of the Sibley County MHMP.

The Sibley County Emergency Management Director is the individual responsible for leading all efforts to monitor, evaluate, and update the hazard mitigation plan within the 5-year window. Throughout the 5-year planning cycle, the Sibley County Emergency Management Director (EMD) will work with the Sibley County Emergency Managers Group to serve as the group to help monitor, review, evaluate, and update the Multi-Hazard Mitigation Plan. The group includes designated city emergency managers and fire chiefs from the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, New Auburn, and Winthrop and also includes city administrators, city clerks, and mayors as needed. The Sibley County EMD conducts outreach to and communicates with the group on a quarterly basis on emergency management matters regarding severe weather awareness, local preparedness, mitigation, and response & recovery as needed. Additional stakeholders will be added based on need or in response to severe weather events. If necessary, the Sibley County Emergency Management Director will convene the group to meet on a more regular basis to monitor plan implementation progress and reassess needs and opportunities. This could be done in response to funding cycles of programs that provide resources for hazard mitigation activities. If there is a need for a special meeting due to new developments or a declared disaster occurring in the county, the group will meet to update pertinent mitigation strategies. Depending on Sibley County opportunities and fiscal resources, mitigation projects may be implemented independently by individual communities or through local partnerships.

The committee will continue to review the MHMP goals and objectives to determine their relevance to changing situations in Sibley County. In addition, state and federal policies will be reviewed to ensure they are addressing current and expected conditions. The committee will also review the risk assessment portion of the plan to determine if this information should be updated or modified. The parties responsible for the various implementation actions will report on the status of their projects, and will include which implementation processes worked well, any difficulties encountered, how coordination efforts are proceeding, and which strategies should be revised.

Updates or modifications to the MHMP during the five-year planning process will require a public notice and a meeting prior to submitting revisions to the individual jurisdictions for approval. The plan will be updated via written changes, submissions as the committee deems appropriate and necessary, and as approved by county commissioners.

Throughout the five-year window of the plan, Sibley County Emergency Management Director will request updates from county departments and jurisdictions on that status of mitigation efforts so that progress notes may be maintained for the next plan update.

7.2 Implementation

Sibley County and its included municipalities share a common Multi-Hazard Mitigation Plan and work together closely to develop, revise, and implement it. This MHMP provides a comprehensive chart of mitigation actions for Sibley County and its jurisdictions (see Section 6.3). The cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, New Auburn, and Winthrop participated in the MHMP planning process and identified the specific mitigation strategies that they would seek to implement in their communities during the five-year planning cycle. These mitigation actions are provided in Appendix J.

A number of implementation tools are available to address hazards. Many of these tools are below, however, in some cases additional discussion is needed in order to identify what strategies are most appropriate to use. This will be part of an ongoing discussion as Sibley County looks for opportunities for plan implementation. The following tools will be considered:

Education: In many cases, education of residents has been identified as one of the most effective mitigation strategies.

Capital Investments: Capital investments such as fire and ambulance equipment, sprinkler systems and dry hydrants are tools that can limit risks and impacts of natural and man-made hazards.

Data Collection and Needs Assessments: Data collection and needs assessments can aid in gaining a better understanding of threats and allow planning for mitigation strategies accordingly. As resources are limited for this part of the planning process, additional data collection is likely to be an ongoing activity as resources become available.

Coordination: Responsibilities for mitigation strategies run across various county departments, local fire and ambulance departments, city and township governments, and a host of state and federal agencies. Ongoing coordination is an important tool to ensure resources are used efficiently. Coordination can also avoid duplication of efforts or prevent gaps that are created because of unclear roles and responsibilities. The mitigation plan review process can function as a tool to have an ongoing discussion of roles, responsibilities, and opportunities for coordination.

Regional Cooperation: Counties and public safety services providers throughout the region often share similar challenges and concerns. In some cases, a regional approach may be warranted as a mitigation strategy in order to save resources. Organizations such as FEMA Region V and the MN Department of HSEM through the Regional Program Coordinator can offer tools and resources to assist in these cooperative efforts.

Regulation: Regulation is an important mitigation tool for Sibley County. Regulation plays a particularly important role for land use, access to structures and the protection of water resources and public health.

7.3 Continued Public Involvement

Continued public involvement is critical to the successful implementation of the Multi-Hazard Mitigation Plan. The Sibley County Emergency Management Director and the MHMP planning team members will continue to engage new public stakeholders in planning discussions and project implementation during the five-year cycle of this plan.

In order to seek continued public participation after the plan has been approved and during the five-year window of implementation for this plan, Sibley County will take the following measures:

- The plan will be posted on the Sibley County Emergency Management website for the public to read and provide feedback. Collected feedback will be reviewed during the 5-year plan cycle and will be noted for future update of the plan or addressed as necessary.
- Following any major storms or natural disasters, Sibley County Emergency Management will seek to gather concerns and new ideas for mitigation from local residents to include in the next update of the plan. This may be done through public meetings, outreach via social media (i.e., Sheriff's Office Facebook Page), or news releases via local media.
- Each community participating in the plan will be responsible to keep their local government, schools and community members updated and engaged in the implementation of their respective mitigation action charts. (see Appendix J). Each respective jurisdiction will be required to report on the status of mitigation actions in their charts to the Sibley County Emergency Management Director.
- Jurisdictions will use numerous means of public outreach to engage new public stakeholders in providing input on mitigation efforts or concerns on hazards by sharing information at city council/township board meetings, sharing information at special events, working with local schools and partner organizations, and posting information on relevant local or social media that their communities use to inform and engage the public. As mitigation projects are implemented, jurisdictions will work to keep the public updated and engaged in those local efforts.

APPENDICES

Appendix A – References

Appendix B – Adopting Resolutions

Appendix C – Local Mitigation Survey Report

Appendix E – Past Mitigation Action Review Status Report

Appendix F – Planning Team Meetings

Appendix G – Public Outreach & Engagement Documentation

Appendix H – Minnesota Department of Health Climate & Health Report

Appendix I – Critical Infrastructure

Appendix J – Mitigation Actions by Jurisdiction

Appendix A – References

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Appendix B – Adopting Resolutions

Appendix C – Local Mitigation Survey Report

Sibley County

Local Mitigation Survey Report

Overview

As part of Sibley County's Multi-Hazard Mitigation Plan update, participating jurisdictions and county personnel were asked to fill out a Local Mitigation Survey (LMS) form. The purpose of the survey was to gather jurisdictionally-specific information needed to support update of the plan and to help inform development of local-level mitigation actions for the next five-year planning cycle. Following are the responses from the county and jurisdictions that participated in the survey.

LMS Forms

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City of Winthrop	Page 35

SIBLEY COUNTY

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	Moderate	No Change
Ice Storms	X	Moderate	No Change
Tornadoes	X	High	No Change
Windstorms	X	Moderate to High	No Change
Lightning	X	Low	No Change
Hail	X	Moderate	No Change
Flooding	X	High	No Change
Extreme Cold	X	Moderate	No Change
Extreme Heat	X	Moderate	No Change
Drought	X	Low to Moderate	No Change
Wildfire			
Landslides	X	Low to Moderate	No Change
Dam Failure			

- Recent Hazard Events:** Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.

On July 25, 2020 Sibley County experienced a mega-rain event where the county received over 10-inches of rain in an evening. It was estimated there was over \$500,000 in damages to the county.

Every spring the Minnesota River floods causing damage to roadways along the eastern side of the county.

Sibley County experiences several blizzards and severe thunderstorms each year.

3. **Local Vulnerabilities:** Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Flooding	The city of Henderson and properties along HWY 93 and CR 6 are vulnerable to flooding.
Tornadoes	The city of New Auburn has a trailer park and apartments with no designated storm shelter. County Parks do not have storm shelters.
Ice Storms/Blizzards	Power poles and power lines may come down from ice storms & blizzards causing extended power outages for the county.
Landslides	The city of Henderson has a portion of town that may experience a landslide. A disaster event from a landslide occurred in Henderson in 2014.
Extreme Heat	Citizens throughout the county would have issues with cooling in the event of power outages.
Extreme Cold	Citizens throughout the county would have issues with heat in the event of power outages.

4. **Reduction in Vulnerability -** Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall.

HWY 93 and CR 6 will be getting raised up to prevent the city of Henderson from getting closed from 3 directions. The CodeRed mass emergency notification system is used by Sibley County to notify registered users of potential hazards.

5. **Increase in Vulnerability –** Please describe any current conditions or changes that you feel has increased your community’s vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development.

Climate change seems to be affecting weather patterns that is causing more frequent flash flooding and extreme storms.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

1. **Plans, Authorities & Policies:** Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community.

Sibley County has a comprehensive plan and capital improvements plan in place that plan for future development within the county.

Sibley County Emergency Management has an Emergency Operations Plan that is updated on a regular basis which helps the county be ready to respond to disasters across a range of EM

functions. This includes plans in place for sheltering and pet sheltering in the event that people are displaced from their homes following a disaster.

Sibley County participates in the National Flood Insurance Program (NFIP). Sibley County's Planning & Zoning Department maintains the floodplain maps and floodplain management ordinance for the county.

Sibley County Zoning Ordinance Article 300 addresses stormwater management for the County. The ordinance includes building regulations to mitigate against flooding during high-water elevation (for structures along lakes, ponds, flowages, rivers, and streams).

Sibley County enforces MPCA stormwater standards for new development and requires that a Stormwater Pollution Prevention Plan be submitted before the county approves the platting process. The county keeps employees on staff that are qualified through training to review these plans.

Sibley County Highway Department maintains an annual Transportation Improvement Plan (TIP) that identifies and schedules road improvement projects that include culvert and drainage improvements to reduce over-the-road repetitive flooding. The current Sibley County TIP is in place for 2019-2023. The transportation plan will be updated for 2021-2025.

The Sibley County Public Works Department has a snow removal policy in place.

The Minnesota Department of Health (MDH) Regional Office in Mankato works with the owners of manufactured home parks within the County to ensure that they are meeting Minnesota Department of Health (MDH) requirements for storm shelters and evacuation plans.

Sibley County enforces the State Buffer Initiative signed into law in 2015 by Governor Dayton. Sibley County Article 330 "Buffer Ordinance" is established to provide for riparian vegetated buffers and water quality practices and helps to stabilize soils, shores and banks.

2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community.

Sibley County staff related to mitigation efforts include the emergency management director, deputy emergency manager, county administrator, public works director, public health & human Services director, and GIS Dept. Sibley County also has a drainage administrator and a ditch inspector that oversee management of 550 miles of open ditches and 150 of miles of underground tile in Sibley County, consisting of over 85 drainage systems.

The county works closely with the Sibley County SWCD on flood and erosion-related planning & project efforts.

We partner with the American Red Cross to establish MOU's with facilities in the county to serve as official shelter locations that meet ARC shelter requirements for space and accessibility. There are 5 designated shelter facilities within Sibley County that have an MOU with the American Red Cross.

We have close working relationships with emergency managers in MN HSEM Region 5 and support each other in emergency mitigation and preparedness planning, exercises and emergency response, when needed.

We maintain an effective relationship with the National Weather Service for the relay and dissemination of emergency weather information.

3. Programs: Please describe any programs in place that to help accomplish mitigation in your community.

Sibley County Emergency Management utilizes our emergency management website, Sheriff's Office Facebook page and local news media to communicate with residents and visitors on emergency preparedness. A link for the CodeRED emergency notification system is located on the Sibley County website.

Sibley County Emergency Management promotes the use of NOAA weather radios by schools, long-term care facilities, county buildings, local residents, and visitors to receive information broadcast from the National Weather Service (NWS). We promote use of these radios in advance of and during our severe weather months using social media and also during the NWS severe weather awareness weeks.

Sibley County Dispatch conducts monthly testing of outdoor warning sirens to ensure they are in working condition. There are 11 outdoor warning sirens located in Sibley County.

Sibley County Emergency Management participates in and promotes the NWS Severe Weather Awareness Weeks in spring and fall each year and also works with the NWS to provide SKYWARN storm spotter training on an annual basis to local fire and law enforcement departments and local residents that wish to be trained as volunteers.

Sibley County Emergency Management and Sibley County Public Health promote public awareness of personal safety measures to take during periods of extreme cold or extreme heat.

The Sibley County Highway Department actively clears trees on the right-of-way of county-owned roads to reduce the danger of trees falling on roads during severe storm events such as thunderstorms, straight-line winds or ice storms.

4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

County projects are paid through by county budgets. The State recently passed a funding bill that will help pay for raising CR 6 and HWY 93 to mitigate flooding from the Minnesota River.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change?**

No

- **Who is your local municipal or rural electric coop provider?**

McLeod County Coop, MN Valley Electric, Brown County REA, and Benco Electric, and Xcel Energy

- **How do you encourage residents to sign up for emergency notifications?**

Booth at the county fair, county website, mailer to text to enroll with tax statement.

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

Generator back-up power is in place for the Sibley County EOC, courthouse, jail, Sheriff's Office and dispatch. Other county facilities may need generator backup power. In addition, not all of our designated shelter facilities have generator back-up power to provide either heat or cooling if there is a loss of power.

PART C: LOCAL MITIGATION PROJECTS

1. Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.

Continue to conduct public outreach and education to encourage residents to be prepared for severe weather and extreme cold temperatures, to have NOAA weather radios, and to sign up for the county's CODERED system and Sibley County Sheriff's Office Facebook page to receive emergency notifications and other information.

Conduct public outreach & education during tornado season to inform the public on what is a tornado watch/warning and what to do when warning sirens are activated

Install outdoor warning sirens for all three county parks (Clear Lake Park, High Island Creek Park and Rush River Park). Currently the county parks do not have sirens.

Provide assistance to cities in the county that are looking at potentially adding more sirens. A future siren may also be warranted for a portion of Jessenland Township near HWY 25 and CR 14 that has a rural housing development.

The Sibley County Parks and Recreation Department desires to construct storm shelter-rated facilities as it replaces restrooms and comfort stations within the park system. Priorities will be given to parks with campground facilities. Specifically, Rush River County Park, Clear Lake County Park, and High Island County Park, as they have RV and tent campers that are vulnerable to severe weather events such as high winds and damaging hail and thunderstorms. The campgrounds do not have an official storm shelter or tornado safe room.

Many slopes of concern are failing due to seepage. Sites with these issues are really tough to fix and can become difficult conversations with landowners. Stricter setbacks from these ravine areas are necessary to prevent any damage or loss of property.

Property acquisition/relocation should be considered with properties located along TH93 and CSAH 6 due to flooding along the Minnesota River.

Homes along 308th Lane should be considered for relocation due to frequent flooding along the Rush River and Minnesota River.

Homes along CSAH 6 should be considered for relocation due to frequent flooding along Minnesota River.

Minor Localized Flood Risk Reduction - Creation of dams, water storage ponds, and widening of ditch systems to accommodate larger water flows. Widening of ditch systems would provide water storage and reduce flow velocities and generate water storage.

Wildfire Mitigation – The US Fish & Wildlife Service has purchased large portions of land along the Minnesota River bottom. The areas have become overgrown with brush and they create an increased fire hazard during dry periods. Areas should be considered for clear cutting & designated burns to reduce the fire risk.

Work with SWCD and MnDOT to plant and maintain living snow fences in high-risk areas.

The Sibley County Highway Department is responsible for tree removal in the county park system. The emerald ash borer has been discovered in the county and a plan should be developed or created to reduce the impacts to the trees in the park system.

2. **Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

Enrollment in the county's CodeRed notification system needs to improve as well as training and utilizing the product for employees. Flooding has been an ongoing issue and flash flooding is occurring more often. Updating NFIP maps and informing the public to participate in the NFIP. Grant funding is needed to offer property buyouts along HWY 93 and CR 6 that experience continuous flooding issues.

PART D: SURVEY PARTICIPANTS

Andrew Hayden, Emergency Management Director

CITY OF ARLINGTON

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization: Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.**

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	High	No change
Ice Storms	X	Moderate	Increasing
Tornadoes	X	High	No Change
Windstorms	X	Moderate	No Change
Lightning			
Hail			
Flooding	X	High	Increasing
Extreme Cold	X	Moderate	No Change
Extreme Heat	X	Moderate	Increasing
Drought			
Wildfire			
Landslides			
Dam Failure			

- Recent Hazard Events: Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.**

From 2015-2020 the city of Arlington experienced rain events that caused flooding in streets, flooding to city and private properties, and damage to structures such as catch basins, drain pipes, and street surfaces. The most notable event was in 2018 in which the city incurred multiple rain events within a week that saw 7+ inches of rain per event. The severe wet conditions caused for major frost boil damage in streets in the spring of 2019.

In 2019 the city also incurred wide spread storm damage from strong winds and a tornado sighting east of town after the damage. There have been numerous other wind damage events, but this on being the most notable and memorable with the community coming together to clean up.

In 2019 early winter there was a stretch of about a week in February that saw actual temps in the -30s. We shut down for a few days as it was too dangerous for travel.

In early 2020 the city had an ice storm that caused over an inch of sheer ice on the roads leaving travel impossible. There was one accident recorded locally.

3. **Local Vulnerabilities:** Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Flooding	On the west side of the city the sewer pipes incur an influx of storm water during big rains that overwhelm the system and backs up into people's homes. Also, the streets continue to flood in that general area as well. The storm collection pond northwest of town is not built to handle bigger rains. Problems include inflow, holding, and outflow of storm water as the pipes are not big enough, nor is the pond dug deep enough, and an abutting plowed field uses the drainage on the outflow side of the pond, using up valuable flowage space in an undersized pipe. The west/northwest side of town in general does not have the drainage capacity to handle bigger rains that have been occurring. There are also low spots in town that were developed in previous slough areas that floods quickly. We also have a senior care facility in a very low-lying area that experiences flooding and encroaching water to the facility during big rains.
Wind/Ice storms/Blizzards	The city has an abundance of large, old trees on boulevards that could be vulnerable to severe wind, ice, and heavy snow conditions. These trees could pose a hazard to adjacent structures and homes.
Tornado/Straight line Winds	The city has a very open west end of town where there are apartment complexes that house families and elderly people. One structure is a multi-level apartment style housing and the other is ground level duplex. Also, in the area west of town are newer home developments. These areas are particularly exposed to high winds and tornados, since strong storms during the warm months typically approach from the west. The city is also vulnerable to power outages during wind events or other storms since there are many spots in town where trees are growing into power lines. A lot of these are on resident property, some are in alleyways.

4. **Reduction in Vulnerability - Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall.**

In 2015, 2017, and 2019 the city completed street improvement projects that included mitigating flooding issues. Old infrastructure was replaced with new and bigger drainage systems and road surfaces were reduced in size.

In addition, within the last 5 years our public works department has focused its attention on trees in boulevards that pose a risk to storm damage and the budgeting for tree removal has tripled in the last 3 years.

The city also conducts an emergency plan with our emergency planning committee on a yearly basis in conjunction with Sibley County Emergency Management.

Currently the city is planning to do another street reconstruct on the west/northwest end of town which will help solve the flooding/sewage backup issues.

- 5. Increase in Vulnerability – Please describe any current conditions or changes that you feel has increased your community's vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development.**

Recently the fairgrounds were approved to add tiling to city storm drainage in the northwest side of town. This water interrupts flow from downstream storm drainage that flows to the holding pond, already has trouble keeping up with big rains, causing flooding in the area and threatening homes and businesses.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Plans, Authorities & Policies: Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community.**

The city has an emergency planning committee that meets yearly with the county. We pool together phone numbers, lists of equipment availability, and discuss emergency protocol. The city also has an active volunteer fire department and local ambulance department who are available to respond to and help in all types of situations. The city is a part of the League of MN Cities which provides advisory and legality guidance services.

- 2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community.**

Our assistant fire chief is on our emergency planning committee. We also plan with Sibley County. The city has equipment that could help in an emergency (front end loader, bucket truck, chainsaw, and tractor). The city also contracts work to a nearby co-op in a neighboring city that is readily available in most cases. Our office staff notifies the community via Facebook about snow emergencies and when plowing will take effect.

- 3. Programs: Please describe any programs in place that to help accomplish mitigation in your community.**

We participate in the county's CodeRED emergency notification system. We also have a tree removal program in place for trees on boulevards that could pose risk during storm events.

- 4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.**

The city budgets for street and infrastructure repair as needed. We also have increased our budget to remove hazard trees from the boulevards. The city also uses bonds to help fund street reconstruct projects.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change?**

On a larger climate scale, we have recently switched all city street lighting to LED and are working on a plan to switch all buildings over to LED. There are also efforts in place to reduce energy usage in buildings by upgrading HVAC. The city also plants many trees to replace removed trees. This provides shade and cleans the air. Also, with the upgrades to bigger pipes in street reconstructs the city mitigates the more recent flood events.

- **Who is your local municipal or rural electric coop provider?**

Minnesota Valley Electric Coop (MVEC) and Excel Energy

- **How do you encourage residents to sign up for emergency notifications?**

We have not done anything to date.

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

We have a backup generator at our city office, wastewater and water plant, police station, and lift stations.

PART C: LOCAL MITIGATION PROJECTS

- 1. Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.**

Use the city website and city Facebook page to encourage residents to sign up for the county's CodeRED emergency notification system and to be prepared for severe weather events.

Update the city alert system. We have been looking into using Public Alert.

Complete street reconstruction on the west/northwest end of town which will help solve the flooding/sewage backup issues.

Continue to remove trees in boulevards that pose a risk to storm damage.

- 2. Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

None noted.

PART D: SURVEY PARTICIPANTS

Kirby Weckworth, Maintenance Supervisor
Amy Newsom, City Administrator
Richard Nagel, Mayor
James Noxon, Police Officer
Denyse Aldrich, Administrative Assistant

CITY OF GAYLORD

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	High	No Change
Ice Storms	X	Moderate	No Change
Tornadoes	X	Low	No Change
Windstorms	X	High	No Change
Lightning	X	High	No Change
Hail	X	Moderate	No Change
Flooding	X	Moderate	Decreasing
Extreme Cold	X	Moderate	No Change
Extreme Heat			
Drought			
Wildfire			
Landslides			
Dam Failure			

- Recent Hazard Events:** Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.

In the summer of 2016, the city experienced flooding that caused damage to city roads and culverts as well as to private properties. We have also had numerous thunderstorms that have damaged trees and powerlines, resulting in power outages and tree damage to vehicles and homes.

In June of 2020, lightning hit a transformer near Michael's Foods that resulted in a city-wide power outage.

- Local Vulnerabilities:** Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Flooding	During heavy rainstorms some of our city streets are prone to flooding as well as some basements in homes.

Ice Storms, Blizzards	We have power lines and power poles that have failed or may fail due to heavy snow and ice storms.
Windstorms and Tornadoes	We have one mobile home park without a storm shelter where residents are vulnerable to high wind events. We also have residents that do not have basements.
Extreme Cold	We have seniors & children are vulnerable to extreme cold, especially if the power goes down during storm events. We have an elementary school and a large nursing home.

- 4. Reduction in Vulnerability - Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall.**

Within the last few years, the city completed a street reconstruction project which increased our storm sewer size and added more catch intakes. The city is also adding a future storm water pond in 2021, and possibly building a new public works building. We are also getting two new pumps at our lift stations.

We have encouraged business and residents to enroll in the county’s CodeRed system so they will be aware when severe weather is coming. The city has recently increased use of our website and Facebook pages to communicate with residents on emergency preparedness.

We have also recently maintained our emergency weather sirens, such as buying all new batteries and repairing a charging board. We check the sirens on a monthly basis.

- 5. Increase in Vulnerability – Please describe any current conditions or changes that you feel has increased your community’s vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development.**

Over the past few years, the city has had a few new development projects where new streets were created and new homes are being built. The city also added a brand-new apartment complex and a brand-new elementary school. All of this would increase the cost of damage due to a tornado, wind or hail. With an increase in population and construction of more homes and commercial properties, we have also witnessed more storm water discharging to our stormwater system and natural waterways. We have a large nursing home and assisted living facility, where there is a large concentration of senior residents in one location that will need assistance during a disaster event.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Plans, Authorities & Policies: Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community.**

Our city has a 20-year comprehensive plan that is designed to plan for the future physical growth of the city and appropriate land uses. The city participates in the National Flood Insurance Program (NFIP) and we have a floodplain ordinance in place. We have a 5-year

transportation plan and capital improvement plan that identifies and schedules new development and road improvement projects to reduce over-the-road repetitive flooding. Our city provides information to new residents on how to sign up for emergency notifications, such as CodeRed.

2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community.

Our police chief is the city's designated emergency manager. Our city has a public safety committee/OSHA committee that meets once a month. The county has its own GIS Specialist/I.T. Director. We have a city engineer and a public works director that address road maintenance issues for flooding (culverts, repetitive flooding).

3. Programs: Please describe any programs in place that to help accomplish mitigation in your community.

The city participates in the county's emergency alert system and we promote residents to sign up for it by having a link on our website and Facebook pages to the registration site. We post severe weather information out on our city Facebook pages. Our local school practices tornado drills on an annual basis. Each spring & fall we do active outreach to homeowners to clear leafy and woody debris from roadside gutters to prevent clogging and over the road flooding in these areas. Each spring and winter we do outreach to encourage residents to maintain their sump pumps to reduce the chances of basement flooding. We also own our own emergency weather sirens, street sweeper, and encourage residents not to pump their sump pump water in our sanitary sewers.

4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

The city primarily uses its own budget to address local mitigation measures, such as replacement of culverts. We have also worked closely with the county highway engineer on local flood mitigation projects for roads and the county zoning department when we updated our local floodplain ordinance. We are also currently looking at possibly purchasing another siren. We are adding a new storm water pond next year as well.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change?**

We have recently installed all new LED lights in city owned buildings, as well as programmable thermostats. We are also looking at buying electric vehicles and installing charging stations. The city has added 7 new solar gardens and is working with business owners to add 3 more.

- **Who is your local municipal or rural electric coop provider?**

Xcel Energy

- **How do you encourage residents to sign up for emergency notifications?**

A link for the county's CodeRed system is posted on our website and city Facebook pages.

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

We do not currently have any. We need generators for our city emergency facilities & services, such as City Hall, the fire department, and our EMS building which houses both the police department and ambulance services.

PART C: LOCAL MITIGATION PROJECTS

1. **Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.**

We need a storm shelter or tornado safe room for our residents that do not have basements and for our residents that live in the trailer park in mobile homes. We are currently looking at possibly purchasing another siren. We also need to identify a mass care shelter.

The city has a need for additional storm sewer upgrades and purchase of additional pumps in the event of flooding. The city is planning to add a storm water pond in 2021, and possibly building a new public works building. We are also getting two new pumps at our lift stations.

Continue to use the city website and Facebook page to communicate with our residents on emergency preparedness. Public education is a standing need and homeowners would benefit from more information on how to be prepared for bad storms and extended power outages.

We need portable generators for our City Hall, fire department, and EMS building.

2. **Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

Not all of our residents are signed up for the City's/County's emergency notification system. There are also new developments occurring with some homes/apartment buildings being built on slabs instead of with basements – this leaves residents more vulnerable in the event of severe weather, such as a tornado.

PART D: SURVEY PARTICIPANTS

Lory Young, City Administrator
Ty Reimers, Public Works Director
Charlie Eichten, City Emergency Manager/Police Chief

CITY OF GIBBON

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	High	Increasing
Ice Storms			
Tornadoes	X	High	No change
Windstorms	X	High	No change
Lightning	X	Moderate	No change
Hail	X	Moderate	Increasing
Flooding	X	High	Increasing
Extreme Cold	X	High	No Change
Extreme Heat	X	Moderate	No change
Drought			
Wildfire			
Landslides			
Dam Failure			

- Recent Hazard Events:** Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.

In 2017 and 2019 the city experienced an excessive amount of rain which caused flooding and residential back up.

In 2019 we experienced extreme cold along with the excessive rain falls which resulted in major frost boils in our streets.

- Local Vulnerabilities:** Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Flooding	Our infrastructure is not capable of handling excessive amounts of rain in a short period of time. This will cause back up to residential properties
Blizzards	We have powerlines and power poles that may fail due to heavy snow and ice storms

Windstorms and Tornadoes	We have a campground located south of Gibbon that has no warning siren and no storm shelter for campers.
Extreme Cold	If we would lose power our main priority would be to ensure children and vulnerable adults are cared for.

- 4. Reduction in Vulnerability - Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall.**

As the city continues to redo streets, we have worked to upsize our sanitary and storm sewer infrastructure. We televised all residential properties on our street project and enforced them to upgrade private sanitary lines going to the street if they had cracks or joint offsets to ensure no ground water is getting into our sanitary sewer. All residents are required to connect their sump pumps to street discharge after a street project has gone past their house. As we continue to redo streets this will be done throughout the town. Currently, residents may discharge their sumps pumps into floor drains in the winter/cold months until we supply a street discharge.

When severe storms are approaching, we have our local volunteer firemen go to the campground to warn campers of weather moving in.

- 5. Increase in Vulnerability – Please describe any current conditions or changes that you feel has increased your community’s vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development.**

None noted.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Plans, Authorities & Policies: Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community.**

We only allow sump pump discharge into the sanitary sewer from Oct. 15 to April 15 and only if the city has not supplied a discharge line to the street. We will continue to televise private residential sewer lines to ensure not ground water is going into sanitary sewer. We have a company check out our tornado sirens twice a year. Yearly maintenance is done to both our lift stations.

- 2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community.**

Our fire department, emergency manager, public works director, city administrator and city council all work together to ensure public safety.

3. Programs: Please describe any programs in place that to help accomplish mitigation in your community.

The city works with Sibley County Emergency Management for our hazard mitigation plan. We send out our fire fighters for weather watch when severe weather is moving in. Our fire department uses also social media to alert residents of weather safety. The city will remind all residents of switching sump pump draining to outside drainage in the spring.

4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

The city uses their own general budget as we plan projects. In the past the city has applied for FEMA grants during a disaster period.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change?**

No

- **Who is your local municipal or rural electric coop provider?**

Xcel Energy

- **How do you encourage residents to sign up for emergency notifications?**

Gibbon Fire & Rescue Facebook page.

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

We have 2 permanent backup generators for our lift stations. We are hoping to receive a grant to purchase a generator for our water treatment plant.

PART C: LOCAL MITIGATION PROJECTS

1. Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.

Having a siren at the county park south of Gibbon would be a drastic help so we are not relying on our volunteer fire personnel to inform campers.

The campground is also in need of a storm shelter.

Obtaining a generator for our water treatment plant is a top priority in case of electrical outage.

Continue to encourage residents to sign up for the county's CodeRed system and to be prepared for severe weather.

2. **Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

None noted.

PART D: SURVEY PARTICIPANTS

Jason Rettig, Public Works Director
Dana Lietzau, City Administrator

CITY OF GREEN ISLE

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization: Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.**

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	High	No Change
Ice Storms	X	High	No Change
Tornadoes	X	Moderate	No Change
Windstorms	X	High	No Change
Lightning	X	Low	No Change
Hail	X	Moderate	No Change
Flooding	X	Low	No Change
Extreme Cold	X	Moderate	No Change
Extreme Heat	X	Low	No Change
Drought	X	Low	No Change
Wildfire			
Landslides			
Dam Failure			

- Recent Hazard Events: Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.**

Over the last 5 years we have experienced heavy rain storms, severe winter storms as well as hail storms.

In February 2019 early winter we had a period of extreme cold where temps were in the -30s.

In early 2020 the entire area had an ice storm that caused over an inch of sheer ice on the roads leaving travel impossible.

- Local Vulnerabilities: Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.**

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Ice Storms, Blizzards	We have power lines and power poles that could fail due to heavy snow and ice storms.

Windstorms and Tornadoes	New residential development being constructed is being built slab on grade. These homeowners do not have a basement to retreat to in case of extreme wind storms or tornadoes.
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- 4. Reduction in Vulnerability - Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall.**

The city of Green Isle has worked diligently to improve our water and wastewater services.

- 5. Increase in Vulnerability – Please describe any current conditions or changes that you feel has increased your community’s vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development.**

The city of Green Isle has been experiencing a great deal of growth with housing developments on all four corners of the city. In the event of a severe storm this may result in higher costs for damages that could occur.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Plans, Authorities & Policies: Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community.**

The city has a sump pump ordinance prohibiting certain sump pump and other discharges into the city’s sanitary sewer system. The city’s zoning ordinance includes an ordinance for shoreland management to control development near shorelands.

- 2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community.**

The fire chief is the city’s designated emergency manager. We have a part time public works supervisor and a part-time city clerk-treasurer. We work closely with the Sibley County Emergency Manager as well. The city combines many essential functions and services with the city of Arlington, namely water treatment and wastewater services.

- 3. Programs: Please describe any programs in place that to help accomplish mitigation in your community.**

We have an outdoor warning siren for civil defense/tornadoes to alert the community if the need arises. Our fire department is also trained in severe weather spotting from SkyWarn trainings with the National Weather Service.

4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.

The city primarily uses its own budget to address local mitigation measures and works with Sibley County as needed.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change?**

No

- **Who is your local municipal or rural electric coop provider?**

Xcel Energy

- **How do you encourage residents to sign up for emergency notifications?**

Nothing formal to date. We do include information for the Sibley County Sheriff's Dept. website on our city website

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

The city has a generator in place for the water supply/sewer system. We do not have a generator for the Fire Hall.

PART C: LOCAL MITIGATION PROJECTS

1. Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.

Update the city website under "Emergency Info" to include how to sign up for the Sibley County CodeRED emergency notification system. Use the city website and city Facebook page to provide information on severe weather and encourage residents to be prepared. Also obtain a backup generator for the fire hall.

2. Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.

None noted.

PART D: SURVEY PARTICIPANTS

Scott Vos, Fire Chief

CITY OF HENDERSON

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	Low	No Change
Ice Storms	X	Moderate	No Change
Tornadoes	X	Low	No Change
Windstorms	X	Low	No Change
Lightning	X	Low	No Change
Hail	X	Moderate	No Change
Flooding	X	High	Increasing
Extreme Cold	X	Low	No Change
Extreme Heat	X	Low	No Change
Drought	X	Low	No Change
Wildfire	X	Low	No Change
Landslides	X	Moderate	Increasing
Dam Failure			

- Recent Hazard Events:** Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.

Over the past 5 years the city of Henderson has been involved in 3 Minnesota River floods and part of federal disaster declarations.

- Local Vulnerabilities:** Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Flooding	Pump stations, ditches, roads, debris, utilities, sanitary sewer, traffic access, etc. have been pushed to capacity or over capacity during past floods.
Landslide	Heavy rain event 2014 no access from the west-no action taken
Excess Debris	Heavy rainfall has deposited excess debris in ponds/Henderson ponding area/ditches.

- 4. Reduction in Vulnerability - Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall.**

The city is working with state officials through the current bonding bill to try and deal with road access issues during flooding. We are also discussing flood mitigation options with FEMA officials. In addition, we are working with the city engineer to develop storm water management and retention plans.

- 5. Increase in Vulnerability – Please describe what you feel has increased your community's vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development.**

Weather pattern changes seem to be increasing the frequency of floods on the Minnesota River and in the basin.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Plans, Authorities & Policies: Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community.**

We are working with the State, FEMA and Sibley County on funding to implement flood mitigation options as well as using local resources such as volunteers, elected officials, paid city staff, etc.

- 2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community.**

We have a public works director and a city emergency manager/fire chief. We work with the State, FEMA, as well as the county.

- 3. Programs: Please describe any programs in place that to help accomplish mitigation in your community.**

In the current draft of the Minnesota State Legislative bonding bill approved by the Minnesota Legislature awaiting the Governor signature is a plan to provide funding to assist in mitigation efforts. When details of that plan become available the city's plan is to follow up with FEMA for additional assistance. Also working with Sibley County Soil & Water Conservation District.

- 4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.**

City funding as well as state, federal and county assistance.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change? No**

No

- **Who is your local municipal or rural electric coop provider?**

Excel Energy and Minnesota Valley Electric Coop

- **How do you encourage residents to sign up for emergency notifications?**

Announcements via city council Meetings, Bulletin Boards, Local Media, Social media

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

We have a generator for our wastewater system, but we need backup power for our water tower and 2 lower pump stations.

PART C: LOCAL MITIGATION PROJECTS

- 1. Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.**

Passage of the bonding bill; work on water control facilities within the Minnesota River basin.

Policy plans and implementations related for discharge of storm water in the Minnesota River drainage basins waterways; soil and water conservation plans, etc.

Use city website & Facebook to encourage residents to sign up for the county's CodeRed system and to be prepared for severe weather.

We need backup power for our water tower and 2 lower pump stations.

Work with MnDOT and Sibley SWCD to address the need for a western road access to the city.

- 2. Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

Lack of money to implement projects, lack of a comprehensive basin plan, and inadequate ways to enforce surface water drainage solutions

PART D: SURVEY PARTICIPANTS

Lon Berberich, City Administrator
Paul Menne, Mayor
Tom Phillips, City Emergency Manager
Lindsey Dhaene Deputy Clerk

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	Low	No Change
Ice Storms	X	Low	No Change
Tornadoes	X	Moderate	No Change
Windstorms	X	Moderate	Increasing
Lightning	X	Low	No Change
Hail	X	Moderate	Increasing
Flooding	X	High	Increasing
Extreme Cold			
Extreme Heat			
Drought			
Wildfire			
Landslides	X	Low	Increasing
Dam Failure			

- Recent Hazard Events:** Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.

In the spring of 2019, we experienced flooding due to high velocity surface water flows as a result of heavy runoff from rainfall and rapid snow melt. This flooding caused damages to roads, ditches, park facilities and grounds along with damages to private property.

In 2019 we also experienced a large hail event that caused damage to many homes.

- Local Vulnerabilities:** Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Flooding	We have several areas in town that are subject to frequent spring flooding.
Windstorm/Tornadoes	We have 1 mobile home park without a storm shelter.
Hail	We had many homes damaged from a large hail storm in 2019.

- 4. Reduction in Vulnerability - Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall.**

The city of Le Sueur is currently working with FEMA on potential mitigation projects for areas within our jurisdiction that are vulnerable to flooding.

We are also looking into possible FEMA funding to help convert existing municipal space into a community storm shelter/community mass care center.

- 5. Increase in Vulnerability – Please describe any current conditions or changes that you feel has increased your community’s vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development.**

Over 50% of the new residential homes built in the past 3 years have been slab on grade foundations with no basements leaving residents vulnerable in the event of a tornado or other severe storms.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Plans, Authorities & Policies: Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community.**

The city of Le Sueur has a 2040 comprehensive plan in place that was adopted in 2016 that addresses future growth and land usage.

- 2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community.**

The city of Le Sueur has a full time building official who is the city’s emergency manager. We also have a public works director and a contracted city engineer on staff to address road maintenance. We have our own municipal power utility as well as our own water and wastewater treatment facilities.

- 3. Programs: Please describe any programs in place that to help accomplish mitigation in your community.**

Nothing at this time.

- 4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.**

We are currently working with FEMA and HSEM on potential mitigation projects including relocating facilities out of reoccurring flood areas but nothing has been approved at this point.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change?**

Not currently.

- **Who is your local municipal or rural electric coop provider?**

The Le Sueur Electric Utility Department (MMPA)

- **How do you encourage residents to sign up for emergency notifications?**

We use our city website.

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

We currently have backup generators at several critical facilities including the City Hall/police department, fire hall, and the water/wastewater treatment facilities. We would need an additional back-up generator if we created a community storm shelter/community mass care center.

PART C: LOCAL MITIGATION PROJECTS

1. **Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.**

We would like to convert unused municipal space that lacks usage into a community storm shelter and community mass care center. The space would be converted to a gym that could hold a large amount of people from the community during a tornado or other inclement weather event. The space is centrally located within the city.

We have one mobile home park within the city. In addition to the mobile home park, we have a significant amount of slab on grade homes within the city where residents do not have a basement.

We would also like to purchase land to relocate our compost site that is affected by flood waters nearly every spring.

The city would like to acquire property to relocate facilities currently located in areas that are subject to frequent flooding, but significant funding is needed.

2. Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.

The city of Le Sueur needs significant funding assistance to acquire property to relocate facilities currently located in areas that are subject to frequent flooding.

Funding assistance is also needed to repurpose existing space for a community storm shelter and community mass care center.

Over 50% of the new residential homes built in the past 3 years have been slab on grade foundations with no basements leaving residents vulnerable in the event of a tornado or other severe storms.

PART D: SURVEY PARTICIPANTS

Justin Nielsen, Emergency Manager
Jasper Kruggel, City Administrator
Rich Kucera, Public Services Director
Samantha DiMaggio, Community Development Director

CITY OF NEW AUBURN

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	High	No Change
Ice Storms	X	Moderate	No Change
Tornadoes	X	Low	No Change
Windstorms	X	Moderate	No Change
Lightning	X	Moderate	No Change
Hail	X	Moderate	No Change
Flooding	X	Moderate	No Change
Extreme Cold	X	Moderate	No Change
Extreme Heat		Low	
Drought		Low	
Wildfire		Low	
Landslides		Low	
Dam Failure		Low	

- Recent Hazard Events:** Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.

Over the last 5 years the city of New Auburn had no severe storms resulting in damages.

- Local Vulnerabilities:** Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Flooding	Our city sewer lift station is vulnerable to failure during flood events if the power goes down or the lift station is flooded.
Ice Storms, Blizzards	We have power lines that may fail due to heavy snow and ice storms.
Windstorms and Tornadoes	We have a mobile home park (Divine Acres) without a storm shelter where residents are vulnerable to high wind events.
Extreme Cold	We have seniors & children are vulnerable to extreme cold especially if the power goes down during storm events.

- 4. Reduction in Vulnerability - Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall**

The city is currently in the process of having pre-engineering plans drawn up for our sanitary and storm water systems.

- 5. Increase in Vulnerability – Please describe any current conditions or changes that you feel has increased your community’s vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development.**

None at this time.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Plans, Authorities & Policies: Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community**

We are in the pre-engineering process for upgrading our storm and sanitary sewer systems.

- 2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community**

Our fire chief is the city’s designated emergency manager. We have a city public works director that address road maintenance issues for flooding (culverts, repetitive flooding).

- 3. Programs: Please describe any programs in place that to help accomplish mitigation in your community**

The city has its own emergency alert system called Public Alert. Our fire department participates in Severe Spring Weather Awareness Week. In April we use our newsletter to post about spring severe weather awareness information. Each spring and winter we do outreach to encourage residents to maintain their sump pumps to reduce the chances of basement flooding.

- 4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community.**

The city primarily uses its own budget to address local mitigation measures, such as replacement of culverts. We are in the pre-engineering process to update our sanitary and storm water systems. We will be applying for grants to assist with this cost.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change?**

Nothing at this time.

- **Who is your local municipal or rural electric coop provider?**

Within city limits is Excel Energy, and our spray field is McLeod Co-op

- **How do you encourage residents to sign up for emergency notifications?**

When a resident applies for water & sewer services, they automatically get signed up for our Public Alert System through our water/sewer program.

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

We have a permanent and a portable back-up generator.

PART C: LOCAL MITIGATION PROJECTS

1. **Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community**

We need a storm shelter or tornado safe room for our mobile home park within the city.

Public education is a standing need and homeowners would benefit from more information on how to be prepared for severe weather and extended power outages. We have a city website and a city Facebook page where we can share information with the public.

2. **Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

The city has a need for storm sewer upgrades.

PART D: SURVEY PARTICIPANTS

Doug Munsch, Mayor
Roberta Zaske, City Clerk-Treasurer

CITY OF WINTHROP

PART A: HAZARD IDENTIFICATION, RISK ASSESSMENT & VULNERABILITY ANALYSIS

- Hazard Identification & Risk Prioritization:** Please fill out the following chart, indicating the natural hazards that pose risk to your community, your priority level of those hazards and if the priority of those hazards has changed over the last 5 years or since the last plan.

Natural Hazard	History Mark "X" for hazard events that have occurred within your jurisdiction.	Risk Prioritization Indicate the priority level of this hazard in your jurisdiction using HIGH, MODERATE or LOW . Consider the anticipated likelihood of future events and the potential impacts to life safety, structures, systems, vulnerable populations or other community assets.	Change in Risk Note if you feel the risk of this hazard is INCREASING, DECREASING , or has had NO CHANGE in your jurisdiction. You may add comments if needed.
Blizzards	X	High	Increasing
Ice Storms	X	High	Increasing
Tornadoes	X	Moderate	No Change
Windstorms	X	Moderate	No Change
Lightning	X	Low	No Change
Hail	X	Low	No Change
Flooding	X	Moderate	No Change
Extreme Cold	X	Moderate	No Change
Extreme Heat	X	Moderate	No Change
Drought	X	Low	No Change
Wildfire			
Landslides			
Dam Failure			

- Recent Hazard Events:** Please describe any severe weather or disaster events that have occurred over the last 5 years that caused damages or loss of life in your community.

In 2016 and 2017 we experienced 2 winters that were very cold and snowy and caused significant structural damage. In 2017 and 2020 we experienced severe hail storms in 2017 and 2020 that caused significant structural damage.

- Local Vulnerabilities:** Please use the chart below to identify what specific critical infrastructure (i.e., structures or systems), populations, or other assets in your community are susceptible to damage and loss from specific hazard events.

Natural Hazard (please list)	Vulnerability Assessment List & describe what specific structures, systems, populations, or other community assets are susceptible to damage and loss from specific hazard events.
Flooding	Our bypass lift station is susceptible to being overwhelmed during high rain events.
Windstorms and Tornadoes	We have 1 mobile home park and a municipal campground without storm shelters.
Extreme Cold	We have seniors & children are vulnerable to extreme cold, especially if the power goes down during storm events.

- 4. Reduction in Vulnerability - Please describe any particular actions your community has taken to reduce vulnerability against future severe weather or disaster events. This can include examples of any work that has been completed or is underway that you would consider mitigation, such as developing plans or implementing projects to deal with future heavy rainfall.**

We are currently upgrading our storm sewer lines and we are having a storm water study done. We use cameras in residential sewers to reduce inflow and infiltration.

The city employs a company for regular siren maintenance.

We are also continuing to reduce I&I to reduce basement flooding and property damage.

- 5. Increase in Vulnerability – Please describe any current conditions or changes that you feel has increased your community’s vulnerability to future severe weather or disaster events. Please include anything related to population growth, zoning or development**

Nothing.

PART B: LOCAL MITIGATION CAPABILITIES ASSESSMENT

- 1. Plans, Authorities & Policies: Please describe what specific plans, authorities or policies are in place to help accomplish mitigation in your community.**

The city has a comprehensive plan.

- 2. Organizational Capacity: Please describe what staff or partnerships are in place to help accomplish mitigation in your community.**

Our police chief is the city’s designated emergency manager. The police department, ambulance and fire department work closely together to mitigate any emergency issues that come up. (Example: When motorists are stranded in the surrounding areas due to weather). We have a street supervisor who works closely with the State on street and flooding issues. We also have our own municipal utility that is responsible for mitigating power outages.

- 3. Programs: Please describe any programs in place that to help accomplish mitigation in your community.**

We post Facebook updates and do sump pump awareness outreach to our residents.

- 4. Funding: Please describe any agency partnerships, funding or other resources to help accomplish mitigation in your community. **

The city uses our own budget for funding. We currently have no outside funding.

5. Other Questions:

- **Does your jurisdiction have any plans or policies in place (or in development) related to resilience and adaptation for climate change?**

No

- **Who is your local municipal or rural electric coop provider?**

City of Winthrop municipal utility

- **How do you encourage residents to sign up for emergency notifications?**

We have not done anything to date.

- **Do you have (or need) portable or permanent back-up generators for specific critical facilities?**

No, there is no need at this time.

PART C: LOCAL MITIGATION PROJECTS

- 1. Local Mitigation Projects: Please describe any specific mitigation activities you think would help to address local vulnerabilities and reduce risk against future hazard events in your community.**

Use the city website & Facebook page to encourage residents to sign up for CodeRed and to be prepared for severe weather.

Work with Sibley County to address the need for our 1 mobile home park and municipal campground that do not have storm shelters.

Continue to maintain the city warning siren.

Continue to reduce I&I to reduce basement flooding and property damage.

- 2. Gaps or Deficiencies: Please describe any specific gaps or deficiencies that are a barrier to implementing local mitigation measures.**

Budget Restraints.

PART D: SURVEY PARTICIPANTS

Karen Johnson, Chief of Police
Jenny Hazelton, City Administrator

Appendix D – Plans & Programs in Place

Sibley County

MHMP Plans in Place Form

Planning & Regulatory

<i>Plans/Programs</i>	<i>Yes/No</i>	<i>Comments</i>
Comprehensive/Master Plan	Yes	
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Emergency Operations Plan	Yes	
Climate Adaptation Plan	No	
Continuity of Operations Plan	Yes	
Transportation Plan	Yes	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
FireWise Program	No	
Water Conservation/Emergency Preparedness Plan	No	
Wellhead Protection Plan	No	
Database of dry hydrants/well access	No	NA to County
Burning permits/restrictions	Yes	
Water Management Plan	Yes	
Zoning ordinance	Yes	
Subdivision ordinance	No	
Floodplain ordinance	Yes	
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	No	
Flood insurance rate maps	Yes	
Acquisition of land for open space and public recreation uses	No	
School closing policy/communications plan in event of inclement weather/temperatures	Yes	Schools responsibility
Mass Care Sheltering Plan	Yes	
Designated Mass Care Sheltering Facilities (list available)	Yes	
Tornado Safe Rooms/Outdoor Storm Shelters (list available)	Yes	
Warning sirens (list all locations)	Yes	All cities

SKYWARN Program	Yes	
CodeRED Mass Notification System	Yes	
Severe Weather Awareness Week	Yes	
Winter Weather Awareness Week	Yes	
NOAA Weather Radios	Yes	
THIRA	No	No current THIRA updates.
Other *please describe		

Administrative & Technical

<i>Administration</i>	<i>Yes/No</i>	<i>Comments</i>
Planning Commission	Yes	
Mitigation Planning Committee	Yes	Planning team for 2020 MHMP update
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Yes	
Mutual aid agreements	Yes	
<i>Staff</i>	<i>Yes/No</i>	<i>Comments</i>
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	Yes	
<i>Technical</i>	<i>Yes/No</i>	<i>Comments</i>
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	
Hazard data and information	Yes	
Hazus analysis	No	Will be done by U-Spatial@UMD for MHMP update.

Education & Outreach

<i>Program/Organization</i>	<i>Yes/No</i>	<i>Comments</i>
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	
Natural disaster or safety related school programs	No	
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
<i>Other *please list & describe</i>		

Appendix E – Past Mitigation Action Review Status Report

Sibley County

Past Mitigation Action Review Status Report

Following is a report on the status of mitigation actions related to natural hazards listed in *Section 5: Mitigation Strategy* of the Sibley County 2015 Hazard Mitigation Plan. This report identifies those actions that have been completed, are being deleted, or are ongoing. Mitigation actions that are noted as "ongoing" will be reviewed & revised as necessary based on the updated risk assessment and local input. This report covers the mitigation actions that were listed for implementation by the county and by city jurisdictions, as applicable.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
1	Winter Storms / Summer Storms	Utilize city ordinances to discourage placement of trees near power lines, particularly in larger Sibley County cities such as Gaylord and Winthrop.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop	Ongoing	Revise as needed for plan update – (county & municipal tree management near powerlines).
2	Winter Storms / Summer Storms	Encourage the public to listen to local news sources, including television, internet sources, Facebook, Twitter, weather apps and radio broadcasts in order to become informed about severe storms.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Falls under ongoing public outreach & education on severe weather awareness.
3	Winter Storms / Summer Storms / Extreme Heat / Extreme Cold	Assure availability of information about severe weather and preparedness for non-English-speaking residents throughout Sibley County, particularly in the City of Gaylord which has a significant Hispanic population.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Falls under ongoing public outreach & education on severe weather awareness.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
4	Winter Storms / Summer Storms	Undertake community education and drills to prepare residents for severe weather storm events.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Community drills do not occur – delete.
5	Winter Storms / Summer Storms	Education of key personnel in all Sibley County cities, particularly in Gaylord, Gibbon, and New Auburn to ensure that they have the newest and best knowledge and resources available to them so that they may be more effective in dealing with winter weather- related emergencies.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop	Ongoing	Revise for plan update. Sibley County EM works to keep local governments engaged in EM awareness and training.
6	Winter Storms / Summer Storms	Develop safe rooms in places where vulnerable populations are at risk such as schools, mobile home parks, and camping grounds	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County GFW Schools, Sibley East Schools	Ongoing	Sibley County and cities will evaluate the need for storm shelters / tornado safe rooms as part of the plan update.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
7	Winter Storms / Summer Storms	Encourage zoning boards throughout the county to require safe rooms in new construction.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County GFW Schools, Sibley East Schools	Delete	Safe rooms will be considered as relevant for each municipality.
8	Summer Storms	Identify places and communities in need of adequate storm shelter facilities for the public (particularly in mobile home areas in the City of Winthrop and the City of Arlington).	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Sibley County and cities will evaluate the need for storm shelters / tornado safe rooms as part of the plan update.
9	Summer Storms	Assure development, improvement, and maintenance of Early Warning Systems (sirens) in all Sibley County communities, particularly Winthrop, New Auburn, Arlington, Henderson, and Gibbon.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Under direction of Sibley County Emergency Management and local cities where outdoor warning sirens are located.
10	Extreme Heat / Extreme Cold / Summer Storms	Have assistance available for elderly residents such as warming/cooling centers, particularly in Gaylord.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Activation of warming / cooling centers would be primarily under the direction of Sibley County Emergency Management / Public Health if extreme temperatures pose threat.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
11	Summer Storms	Building codes should reflect the need for wind- resistant structures throughout the entire county.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Not a strong mitigation action.
12	Summer Storms	Provide public outreach and education regarding disaster preparedness as it relates to summer storm events, particularly in the cities of Winthrop, Gaylord, New Auburn, Arlington, and Gibbon.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Covered under ongoing public education & awareness for severe weather.
13	Flooding / Winter Storms / Drought	Ensure that culverts, drainage ditches, and other water runoff systems have appropriate capacity in order to address ice dams and debris along the road system and bridges during a flooding event.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Sibley County Highway Dept. and local cities continue to address local flood mitigation projects.
14	Flooding	Focus on eliminating or limiting effects of a flood event in flood prone areas, particularly flood-prone areas that have been identified in the flooding hazard section of this document.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Sibley County Highway Dept. and local cities continue to address local flood mitigation projects.
15	Flooding	Maintain existing levee structures in the City of Henderson, in addition to researching ways to strengthen the transportation routes within and around the community.	City of Henderson	Ongoing / Delete	The city continues to inspect and maintain the existing levee system. The information regarding strengthening transportation routes is not relevant for mitigation.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
16	Flooding	Have emergency necessities available for victims and responders in all Sibley County communities and areas, particularly the cities of Henderson, New Auburn, Gaylord, and Arlington. Specifically, stockpiles of sandbags and wall- building materials to erect barriers against floodwaters.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Not relevant for plan update. This falls under emergency response planning.
17	Flooding	Ensure that key personnel in communities that are likely to be involved with the immediate effects of a flooding event (such as fire department and police department staff) undergo continuing training to ensure that they have the newest and best knowledge and resources available to them so that they may be more effective in dealing with flood emergencies, particularly in the City of Henderson, Gaylord, Arlington, and New Auburn.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Not relevant for plan update. This falls under emergency response planning.
18	Flooding	Work to ensure coordination of response efforts during flood events between Sibley County, the State of Minnesota, and federal agencies.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Not relevant for plan update. This falls under emergency response planning.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
19	Flooding	Create and maintain a communication plan for use in the event of a flood emergency.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Not relevant for plan update. This falls under emergency response planning.
20	Flooding	Encourage the construction of wetlands projects in all Sibley County environmentally sensitive areas and other vulnerable natural land areas.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Construction of wetland projects in environmentally sensitive areas is not a relevant flood mitigation effort unless it is to protect structures and life safety against damaging flood waters.
21	Flooding	Upgrade County Road 6 in order to prevent outages of this road during flooding events.	City of Henderson, Sibley County	Ongoing	Ongoing planning, large sections unfunded.
22	Flooding	Upgrade County Road 19 in order to prevent outages of this road during flooding events.	City of Henderson, Sibley County, State of Minnesota	Delete/change	Likely State HWY 19 not CR 19, portion of HWY 19 that floods is in LeSueur CO/Change to HWY 93, floods several times a year.
23	Flooding	Conduct an engineering study and implement its findings to reduce or eliminate flooding in the City of New Auburn	City of New Auburn, Sibley County	Ongoing	New Auburn has contract with Engineers for upcoming storm drainage and sewer replacement.
24	Wildfire	Monitor, control, and update regulations in the City of Henderson regarding the use of all-terrain vehicles (ATVs) and other off-road recreational vehicles in and around the community.	City of Henderson	Delete	Not relevant for plan update.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
25	Wildfire	Identify and support ways to reduce risks of wildfire events in vulnerable areas in and around the community of New Auburn, particularly dried-up wetland areas.	City of New Auburn	Ongoing	Wildfire prevention will be addressed for the City of New Auburn as well as other jurisdictions as relevant.
26	Wildfire	Encourage the provision of proper equipment to fight wildfires for all Sibley County fire departments.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop	Delete	Not relevant for plan update. This is regarding planning for wildfire response.
27	Wildfire	Encourage fire department participation in annual DNR-provided training classes specific to wildfires, and any other relevant training exercises as needed.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop	Delete	Not relevant for plan update. This is regarding planning for wildfire response.
28	Wildfire	Support the participation by all Sibley County cities in the national FireWise wildfire education program, which provides tools for risk assessment/ reduction to interested communities.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop	Ongoing	Promoting Firewise principles will continue for the county / cities as applicable. Has not been done yet.
29	Wildfire	Clarify and research conflicts regarding state land management issues in cases of wildfire.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Not a relevant mitigation action for plan update.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
30	Wildfire	Promote coordination between fire departments and fire districts in times of increased need for assistance.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop	Delete	Not relevant for plan update. Fire departments have existing MOU's that are in place.
31	Wildfire	Utilize zoning ordinances to help prevent damage to built areas due to wildfires.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing / Delete	This will be reviewed to keep for municipalities where it is applicable.
32	Wildfire	Create and maintain an evacuation plan for all cities in the case of wildfire.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop	Delete	Not relevant for plan update. This is related to emergency response planning. The Sibley County EOP addresses evacuation for all-hazards.
33	Extreme Heat / Extreme Cold	Encourage the broadcast of National Weather Service issues heat/wind chill/extreme cold advisories by local radio and television stations in times of extreme temperatures. Issuance of heat advisories serves to warn residents of dangers imposed by extreme heat.	Sibley County	Ongoing	Local media regularly help to broadcast severe weather information received from the NWS.
34	Extreme Heat / Extreme Cold	Ensure the closure of public and private schools when necessary for safety of students and staff in times of extreme temperatures.	Sibley County Schools	Ongoing	School districts and private schools have responsibility for policies regarding closing in the event of extreme temps or severe weather.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
35	Drought	Ensure that all jurisdictions have water conservation strategies in place as needed during periods of drought.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Revise as needed for plan update. In the event of drought, the County and municipalities would promote water conservation strategies.
36	Drought	Identify water access points for humans and animals that may be utilized in the event of a drought. An inventory of these water access points should be created, maintained, and updated as needed.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Not relevant for plan update. In the event of such a severe drought that human water supplies were compromised the county and State would be actively involved for response. Farmers are responsible for their own water planning for livestock.
37	Drought	Create and maintain mutual aid agreements regarding water conservation efforts for all Sibley County communities to use.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Delete	Not a relevant mitigation action that would be enacted.
38	Drought	Ensure that Sibley County and all communities undertake community education to inform residents of drought issues and what it may mean to them and the community.	Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, Winthrop, Sibley County	Ongoing	Public outreach & education will occur during times of serious drought.
66	Dam Failure	Inspect on an ongoing basis all Sibley County dams and reservoir capabilities to ensure dam stability and safety.	Sibley County	Ongoing	Inspection and maintenance of dams occurs by the county and others.

#	Hazard	Mitigation Action	Jurisdiction	Status	Comments
74	Landslides / Soil Erosion	Complete soil stabilization and erosion prevention projects as identified in the engineering study completed on the Cedar Creek, Locust Creek, the Sledding Hill, Upper Mill Creek, and Lower Mill Creek.	City of Henderson, Sibley County	Ongoing	These measures largely fall under the technical assistance of the Sibley County SWCD. Ongoing or new soil stabilization projects will be identified as needed for the plan update with the SWCD.
75	Flooding	Recertify Levee in the city of Henderson,	City of Henderson, Sibley County	Ongoing	Have not received letter for recertification.
76	Flooding	Revise the current operation, maintenance, management and evacuation policies and procedures for the City of Henderson in the event of flooding or severe storms	City of Henderson, Sibley County	Delete	Sibley County Emergency Management works with affected municipalities on evacuation for flooding in the event such situations arise.

Appendix F – Planning Team Meetings

Sibley County MHMP Update

Appendix F - Kickoff Meeting Documentation

Overview:

On May 1, 2020, U-Spatial@UMD hosted a kickoff meeting online that was attended by the Sibley County Emergency Manager. The webinar included a project overview, U-Spatial@UMD's background, the roles and responsibilities of the Emergency Manager, the contents of the Multi-Hazard Mitigation Plan, the planning process, and the projected timeline of the project.

Attached Documentation:

- **Project Handout:** "Minnesota 2020-2021 Multi-Hazard Mitigation Plan Update Project Overview".
- **Webinar Slides:** "Minnesota 2020-2021 Multi-Hazard Mitigation Plan Update Project Kickoff Orientation Webinar"

Minnesota 2020-2021 Multi-Hazard Mitigation Plan Update Project Overview

During 2020-2021, U-Spatial from the University of Minnesota Duluth (U-Spatial@UMD) will be working to update Multi-Hazard Mitigation Plans (MHMPs) for 17 counties and 1 tribe. Our team consists of UMD staff who specialize in GIS applications and research and Hundrieser Consulting LLC, who specializes in stakeholder engagement and mitigation strategies.

Participating Jurisdictions

Aitkin, Carlton, Cass, Dodge, Itasca, Kandiyohi, Koochiching, LeSueur, Mahnomon, McLeod, Otter Tail, Renville, Rock, Sibley, Stevens, Traverse, Watonwan, White Earth Reservation.

Overview of Update Process

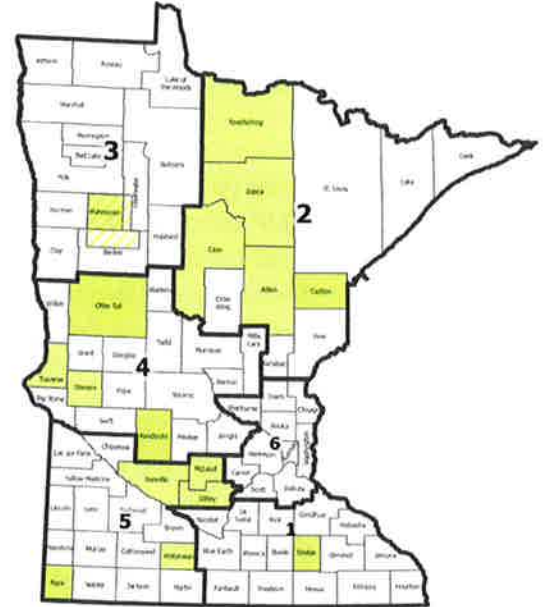
The U-Spatial@UMD team will coordinate with each Emergency Manager throughout the plan update process to engage participating jurisdictions and other stakeholders in the planning process. Following is an overview of key tasks that the U-Spatial@UMD team will facilitate to meet FEMA requirements in the update of each plan:

- Conduct 2 planning team meetings
- Conduct 2 periods of public outreach & engagement
- Assess Plans & Programs in Place to address natural hazards
- Conduct a Past Mitigation Action Review from past plan
- Update prioritization of natural hazards that pose risk
- Complete jurisdictional Local Mitigation Surveys (hazards, vulnerabilities & capabilities)
- Conduct hazard risk assessment for 1% annual chance floods using the Hazus GIS tool
- Inventory critical infrastructure
- Develop hazard profiles for each natural hazard (description, incident history, geographic variability, future probability, relationship to changing climate trends and local vulnerabilities)
- Develop 5-year jurisdictional Mitigation Action Charts

The planning process generally occurs over the course of 14-18 months from start to finish.

Contact

Stacey Stark, U-Spatial@UMD Director (MHMP Project Manager)
Phone: (218) 726-7438 / Email: slstark@d.umn.edu



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Overview of the MHMP Update Process

The U-Spatial@UMD team will coordinate with each Emergency Manager (EM), participating jurisdictions, and other stakeholders throughout the planning process. The plan update generally occurs over the course of 12-18 months from start to finish. Following is an overview of key tasks that will occur and the approximate timeline for completion. This list not represent a complete list of what the plan update entails.

Stage 1 Tasks (4-5 months)

- HMP kickoff meeting/webinar with U-Spatial@UMD
- Develop jurisdictional contact list for MHMP planning team
- Disseminate & document News Release #1 (plan update announcement)
- Complete Plans & Programs in Place Checklist
- Conduct a Past Mitigation Action Review from prior plan
- Complete Capabilities Assessment to address natural hazards
- Hold & document Planning Team Meeting #1
- Complete Local Mitigation Surveys (hazards, vulnerabilities & capabilities)
- Revisit prioritization of natural hazards that pose risk
- Assist U-Spatial@UMD with provision of key data
- Complete inventory of Critical Infrastructure

Stage 2 Tasks (4-6 months)

- Develop 5-year Jurisdictional Mitigation Action Charts
- Conduct hazard risk assessment for 1% annual chance floods using the Hazus GIS tool
- Develop hazard profiles for each natural hazard (description, incident history, geographic variability, future probability)
- Complete county profile sections and maps
- Complete hazard profiles for each natural hazard
- Complete Plan Maintenance section of draft plan

Stage 3 Tasks (2-3 months)

- EM review of Draft Plan
- Hold & document Planning Team Meeting #2
- Finalize Mitigation Action Charts
- Disseminate & document News Release #2 (Public Review & Comment Period)
- EM coordination of plan review by local government(s) & other stakeholders

Stage 4 Tasks (2-3 months)

- Post-public review revisions made to plan (as necessary)
- Draft Plan sent to HSEM for review & approval
- Draft Plan sent to FEMA for review & approval
- Post FEMA review revisions made to plan (as necessary)
- FEMA to send letter stating "Approval Pending Adoption" to EM
- EM to facilitate MHMP jurisdictional adoptions (County/Tribe and cities)

Ongoing - Quarterly 25% Local Match Tracking Quarterly to HSEM

As part of the MHMP plan update, EM's are required to submit quarterly reports to HSEM on their local 25% match accrued through MHMP activities during that quarter.

Minnesota 2020-2021 Multi-Hazard Mitigation Plan Update Project Kick-off Orientation Webinar

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Webinar Purpose & Goals

The purpose of this webinar is to provide an orientation for Emergency Managers participating in 2020-2021 Multi-Hazard Mitigation Plan Updates.

- Introduce the U-Spatial@UMD Team and county contacts.
- Provide an overview of the project.
- Clarify roles and responsibilities.
- Outline the planning process, discuss key tasks and timelines.
- Discuss next steps and answer your questions.

Introductions

U-Spatial@UMD Project Team



Mandy Stark
Project Manager
M.Stark@UMD



Brian Hurd
Emergency Management Planning Consultant
Hurdreiser Consulting, LLC



Sam Vavra
GIS Specialist and Researcher
U-Spatial@UMD



Steve Graham
Research Associate - Flood Modeling Specialist
U-Spatial@UMD

Emergency Managers:

- Name, Title, and Jurisdiction
- Past Experience with MHMP?

Minnesota HSEM:

Jennifer Davis, MN HSEM
State Hazard Mitigation Officer

Project Overview

17 Counties:

Aitkin, Carlton, Cass, Dodge, Itasca, Kandiyohi, Koochiching, Le Sueur, Mahanomen, McLeod, Otter Tail, Renville, Rock, Sibley, Stevens, Traverse, Watonwan

1 Tribal Nation:

White Earth Band of Chippewa



Purpose

The Federal Disaster Mitigation Act of 2000 (DMA 2000) established programs and funding:

"to reduce the loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters"

A local government plan is required in order to maintain eligibility for FEMA hazard mitigation grant programs.

MHMP's must be updated every 5 years

Flooding	Hail	Drought
Dam/Levee Failure	Lightning	Extreme Heat
Wildfire	Winter Storms	Extreme Cold
Windstorms	Landslides	Earthquakes
Tornadoes	Sinkholes & Karst	Coastal Erosion

Natural hazard categories for Minnesota MHMPs. Hazards may be omitted if low risk is demonstrated.

Why U-Spatial@UMD?

➤ Proven experience

Our updates of 30+ MHMPs, as well as the State MHMP, have been quickly approved by FEMA and adopted by counties.

➤ Advanced Capabilities

Expertise in the application of GIS, HAZUS, and research supports plan development and meeting all FEMA requirements.

➤ Ability to Expedite

A consistent and proven approach for multiple counties supports State & FEMA review of draft plans.

➤ Planning Team

Our project team includes advanced GIS students and Hurdreiser Consulting.

Overview of MHMP Update Process

U-Spatial@UMD Team Roles & Responsibilities

- Keep you informed about the progress of your plan.
- Facilitate Planning Team meetings.
- Provide guidance to EM to conduct & document effective public outreach.
- Guide EM and planning team to complete key tasks for plan update.
- Keep up-to-date on FEMA requirements and Minnesota guidance.
- Produce a quality plan that FEMA will approve.
- Answer questions in a timely fashion.
- Provide quarterly reports to HSEM on your plan progress

EM Roles & Responsibilities

- Act as main Point of Contact.
- Track required local 25% match.
- Coordinate engagement of MHMP Planning Team.
- Conduct & document effective public outreach.
- Participate in completion of key assignments for plan update.
- Coordinate with other county/tribal staff to obtain information.
- Assist in timely review of draft document.
- Facilitate completion of local adoptions.

MHMP Planning Team

The MHMP planning team must include representation from local government, related stakeholders and neighboring jurisdictions.

- County/Tribal Government key officials and staff
- Cities – required; Townships – optional
- Other Related Stakeholders (i.e., Schools, Coops, MN DNR, etc.)
- Neighboring county/tribal jurisdictions

Key Tasks:

- Develop Jurisdictional Contact List.
- Hold & document Planning Team Meeting #1.
- Hold & document Planning Team Meeting #2.

Public Outreach

The plan update must document how the public was given the opportunity to be involved in the planning process and how their feedback was incorporated into the plan.

- Collect feedback on local-level concerns & mitigation actions.
- Use of local/social media, websites & community bulletin boards.
- Other outreach (i.e., attendance at City Council mtgs)

Key Tasks:

- Distribute & document News Release #1.
- Distribute & document News Release #2.
- Conduct other public outreach (optional).

Hazard Risk Assessment and Vulnerability Analysis

The U-Spatial@UMD Team will work closely with each EM and key departments to provide information as needed.

Key Tasks

- Review and contribute to critical infrastructure inventory.
- Identify specific, local-level impacts and vulnerabilities.
- Identify if and how risk priorities have changed since the last plan.
- Identify any factors (i.e., new development) that may increase the community's vulnerability to natural hazard events.
- Review social vulnerability factors.

Key Task Assignments

Hundrieser Consulting will coordinate with each EM and participating cities on key task assignments that will provide information required for the plan update.

Key Tasks

- Complete Plans in Place Checklist.
- Complete Capabilities Assessment for Mitigation.
- Conduct Past Mitigation Action Review.
- Coordinate Local Mitigation Survey (LMS) Forms.

Mitigation Action Charts

Hundrieser Consulting will coordinate development of draft 5-year jurisdictional Mitigation Action Charts (MACs) for the county/tribe and each participating city jurisdiction.

Key Tasks

- Complete Planning Team Mtg. #1 & Key Task Assignments.
- Conduct local-level development of MACs.
- Hold Planning Team Mtg. #2 for MAC review.
- Complete final MAC revisions.

Draft Plan Review

The U-Spatial@UMD Team will work with each EM to conduct a review of the draft MHMP and provide an opportunity for public review & comment on the plan.

Key Tasks

- EM review of initial draft plan > Revisions made as needed.
- Distribute News Release #2 - public review & comment period.
- EM coordination of review by key stakeholders.
- Posting of draft plan online with comment form.
- Documentation and incorporation of public feedback.

Plan Submission

The draft MHMP will be submitted to HSEM and FEMA for review & approval. Timing for review & approval is generally within 1-2 months.

Key Steps

- U-Spatial@UMD will submit the draft plan & Plan Review Tool (PRT) to HSEM.
- HSEM will submit the draft plan & PRT to FEMA reviewer.
- FEMA may respond with requests for revisions > U-Spatial@UMD to address revisions and resubmit plan.
- FEMA will send a letter of Approval Pending Adoption (APA status)

Plan Adoption

After FEMA has provided APA status, the county/tribe and all participating jurisdictions must formally adopt the plan.

Notes

- Good jurisdictional participation will facilitate local adoptions.
- Adoption of the plan is required for HMA grant program eligibility.
- Example adoption resolutions are provided for county/tribal adoption and local city adoption. Townships may elect to adopt (not required).
- Resolutions are incorporated into the final MHMP (PDF) by the Emergency Manager or included as hard copies.

Timeline Overview

- 22-Month total timeline (March 2020 – December 2021)
- Most plans take 14-18 months.
- Staggering of plans will be required to complete update of risk assessments, research of hazard histories, etc. for each jurisdiction.
- Many tasks occur concurrently, others must be done in succession.

Due to the COVID-19 Pandemic, we recognize that timing for completing the update of all 18 plans may be affected. If necessary, HSEM will work to extend our project contracts with FEMA to accommodate an extended timeline.

Possible timeline for your plan		Red includes county action items
Stage 1 Tasks (4-5 months)	April – August 2020	HMP Kickoff meeting/webinar with U-Spatial@UMD Develop jurisdictional contact list for MHMP planning team Disseminate & document News Release #1 Hold & document Planning Team Meeting #1 Complete Plans & Programs in Place Checklist Complete Capabilities Assessment to address natural hazards Conduct a Past Mitigation Action Review from prior plan Complete Local Mitigation Surveys Revisit prioritization of natural hazards that pose risk Assist U Spatial@UMD with provision of key data Complete inventory of Critical Infrastructure
Stage 2 Tasks (4-6 months)	August – November 2020	Develop 5-year Jurisdictional Mitigation Action Charts Hazard risk assessment for flooding Develop hazard profiles for each natural hazard Complete county profile sections and maps Complete Draft Plan
Stage 3 Tasks (2-3 months)	December – February 2021	EM review of Draft Plan Hold & document Planning Team Meeting #2 Finalize Mitigation Action Charts Disseminate & document News Release #2 EM coordination of plan review by stakeholders
Stage 4 Tasks (2-3 months)	March – May 2021	Post-public review revisions made to plan (as necessary) Draft Plan sent to HSEM for review & approval Draft Plan sent to FEMA for review & approval

Local 25% Match

Each quarter EM's will be responsible to track and submit local match documentation to HSEM.

Notes:

- EM's are provided with a "Master Match Tracking" Excel Workbook to document match MHMP activities, participants, and amount accrued.
- Regular reminders & guidance will be provided on tracking match.



Next Steps

U-Spatial@UMD Team members will coordinate each EM to commence work on several tasks that will take place over the next several months.

Notes:

- We are sensitive to the workloads of EM's, particularly during COVID-19.
- All information requests or assignments are in prepared form.
- Please communicate your availability to complete/not complete work.
- Plans most expired are priority; however, EM's with completed tasks move up in the que for plan development.



Questions?

What questions do you have for U-Spatial@UMD or HSEM about the MHMP update process?



Contact Information

Stacey Stark, MS, GISP

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slstark@d.umn.edu

218-726-7438

Example Plans:

<https://z.umn.edu/hazardmitigation>



Sibley County MHMP Update

JURISDICTIONAL CONTACT LIST

County Contacts

Name	Title	Phone	Email
Andrew Hayden	EM Director	612-599-4250	andrewh@co.sibley.mn.us
Jeremy Templin	Chief Deputy/Deputy EM	507-227-2302	jeremy@co.sibley.mn.us
Tim Becker	Public Works Director	507-237-4115	timb@co.sibley.mn.us
John Glisczinski	County Administrator	507-237-7805	johng@co.sibley.mn.us
Aaron Goemann	County Ditch Inspector	507-237-4095	aarong@co.sibley.mn.us
Steve Saxton	County Board Chair	507-829-9260	stevesaxton@co.sibley.mn.us
Marilee Peterson	County Auditor	507-237-4067	marileep@co.sibley.mn.us
Klea Rettmann	Public Health HS Director	507-237-4000	klear@co.sibley.mn.us
Jesse Lutterman	GIS Coordinator	507-237-4046	jessel@co.sibley.mn.us
Joel Wurscher	SWCD District Manager	507-702-7077	Joel.wurscher@sibleyswcd.org
Patrick Nienaber	Sheriff	507-237-4330	pat@co.sibley.mn.us
Bobbie Harder	County Commissioner	507-479-3250	bobbieh@co.sibley.mn.us

City Contacts

CITY OF ARLINGTON

Name	Title	Phone	Email
Amy Newsom	City Administrator	507-964-2378	anewsom@arlingtonmn.com
Tim Haggemiller	City EM	507-381-1463	tim@hlinc.net
City of Arlington	CITY General	507-964-2378	cityhall@arlingtonmn.com
Kriby Weckworth	Maintenance Supervisor	507-964-2378	kweckworth@arlingtonmn.com
John Zaske	Fire Chief	507-380-1422	Johnzaske22@gmail.com

CITY OF GAYLORD

Name	Title	Phone	Email
Lori Young	City Administrator	507-237-2338	lyoung@exploregaylord.org
Charlie Eichten	City EM/Chief of Police	507-237-2265	ceichten@exploregaylord.org
Ty Reimers	Public Works Director	507-479-3445	treimers@exploregaylord.org
Justen Rose	Fire Chief	507-380-6404	gfirechief@gmail.com
Sara Burton	Ambulance Director	507-964-2378	sburton@exploregaylord.org

CITY OF GIBBON

Name	Title	Phone	Email
Dana Lietzau	City Administrator	507-834-6566	Cityofgibbon@gmail.com
Jason Rettig	Street Superintendent	507-834-6566	Cityofgibbon@gmail.com
Ryan Panning	Gibbon EM	507-995-0677	ryanpanning@hotmail.com
Toby Bruns	Fire Chief	507-276-8169	Toby.bruns@hotmail.com

CITY OF GREEN ISLE

Name	Title	Phone	Email
Scott Vos	City EM	612-280-8258	scott@vosconstruction.com
City of Green Isle	City General (Diane)	507-326-3901	Greenislecityhall@gmail.com
Scott Vos	Fire Chief	612-280-8258	scott@vosconstruction.com

CITY OF HENDERSON

Name	Title	Phone	Email
Tom Phillips	City EM	952-290-0359	Tmphilips049@gmail.com
Lon Berberich	City Administrator	507-248-3234	Lonber3@mchsi.com
Bruce Gustafson	Public Works	507-248-3234	
Randy Tiegs	Fire Chief	507-327-5062	Randy_tiegs@hotmail.com

CITY OF LE SUEUR (partial with Le Sueur County)

Name	Title	Phone	Email
Jasper Kruggel	City Administrator	507-593-8312	jkruggel@cityoflesueur.com
Justin Nielsen	Emergency Manager	507-593-8317	jnielsen@cityoflesueur.com

CITY OF NEW AUBURN

Name	Title	Phone	Email
Roger Trebbensee	City EM/Fire Chief		Treb1635@gmail.com
City General	City	320-864-5831	Newauburn.city@gmail.com

CITY OF WINTHROP

Name	Title	Phone	Email
Karen Johnson	City EM/Police Chief	612-719-9629	kjohnson@winthropminnesota.com
Jenny Palmer	City Administrator	507-647-5306	administrator@winthropminnesota.com
Troy Martin	Utilities & Public Works	507-766-0503	publicworks@winthropminnesota.com
Justin TenEyck	Fire Chief	320-583-9801	Justinteneyck98@gmail.com
Melissa Lorenz	City Clerk	507-647-5306	cityclerk@winthropminnesota.com

Township Contacts

Name of Township	Name & Title	Phone	Email
Alfsborg Township	James Kuphal, Supervisor	507-237-2579	jim@brdairyeg.com
Arlington Township	Kenneth Mueller, Supervisor	612-987-7459	elginvue@yahoo.com
Bismarck Township	Lyle Forst, Supervisor	507-834-6125, 507-276-2495	roseforst@hotmail.com
Bismarck Township	Adam Stegeman, Clerk	952-423-8118	adamsteg@gmail.com
Cornish Township	Kevin Wenninger, Supervisor	507-647-2469	wennigerkevinken@gmail.com
Cornish Township	Matthew Rabe, Supervisor	507-327-7102	rabeseeds@yahoo.com
Dryden Township	Frank Grimm, Supervisor	507-327-1237	grimmfarms2017@gmail.com
Faxon Township	Tara McConnell, Supervisor	612-702-0056	tmcconnell@e-ims.com
Grafton Township	Joseph Ludowese, Chair	320-894-4533	jpludowese@aol.com
Green Isle Township	Gary Burdorf, Chair	507-964-5815	gburdorf@gmail.com
Henderson Township	Sven Mattson, Chair	507-248-3650	cmattson@frontiernet.net

Henderson Township	Beverly Stueber, Treasurer	507-248-3802	stueberslarrybev@hotmail.com
Jessenland Township	Dan Eibs, Supervisor	507-964-5595	jdeibs@hotmail.com
Kelso Township	Lyle Wiest, Chair	612-499-1113	lyle72@live.com
Moltke Township	John Forst, Supervisor	507-276-4139	jcforst@rsfiber.net
New Auburn Township	Dale Schauer, Supervisor	320-864-3352	djschauer@rsfiber.net
Severance Township	Steve Herschman, Supervisor	507-276-0628	herschmn@gmail.com
Sibley Township	David Kahle, Clerk	507-237-2735	davkahle@gmail.com
Transit Township	Adam Leske, Chair	507-766-1572	leskeadam@yahoo.com
Transit Township	Wayne Grams, Clerk	218-341-3406	Wrgrams54@hotmail.com
Washington Lake Township	William Donnay, Supervisor	320-583-7620	billdonnay@gmail.com

Other Stakeholder Contacts

Name of Agency/Org.	Name & Title	Phone	Email
HSEM	Mark Marcy, Region V Regional Program Coordinator	612-619-6115	Mark.Marcy@state.mn.us
USDA Rural Development Program	Doug Grindberg, Area Specialist	651-602-7794	Douglas.grindberg@usda.gov
Sibley East Schools ISD #2310 (Arlington/Gaylord/Green Isle)	Jim Amsden, Superintendent of Schools	507-964-2292	jim.amsden@sibleyeast.org
GFW Schools ISD #2365 (Gibbon/Fairfax/Winthro p)	Lonnie Seifert, District Superintendent	507-207-2203	lonnie.seifert@gfwschools.org
Green Isle Community School ISD# 4144	Brandy Barrett, Director	507-326-7144	Brandy.Barrett@GreenIsleCommunitySchool.org
Le Sueur-Henderson Public Schools ISD #2397	Dr. Marlene Johnson, Superintendent	507-665-4600	Marlene.johnson@isd2397.org
Minnesota Valley Electric Cooperative	Ryna Hentges, Chief Executive Officer	952-492-2313	ryanh@mvec.net

Neighboring Jurisdiction Contacts

Name of Jurisdiction	Name & Title	Phone	Email
McLeod County	Kevin Matthews, EM Director	320-864-1339	Kevin.matthews@co.mcleod.mn.us
Carver County	Deb Paige, EM Director	952-361-1292	dpaige@co.carver.mn.us
Scott County	Scott Haas, EM Director	952-496-8381	shaas@co.scott.mn.us
Le Sueur County	Ann Traxler, EM Director	507-3800048	atraxler@co.le-sueur.mn.us
Nicollet County	Justin Block, EM Director	507-934-7874	Justin.block@co.nicollet.mn.us
Renville County	Michael Hennen, EM Director	320-523-3838	mikehe@renvillecountymn.com

Sibley County MHMP Planning Team Meeting #1

September 15, 2020 - Meeting Summary & Documentation

Summary: On Tuesday, September 15, 2020, Sibley County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 1st Planning Team Meeting for the update of the Sibley County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally present information about the Sibley County MHMP update and to discuss key items that would inform plan development. The meeting was held via Zoom webinar video conference and was facilitated by Stacey Stark and Bonnie Hundrieser of the U-Spatial@UMD project team.

Stakeholder Invitations: Sibley County Emergency Management invited all stakeholders included on the county's MHMP Update Jurisdictional Contact List (JCL), which includes the key County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts identified to be invited to participate in the plan update process. Contacts were encouraged to engage additional staff or to send someone in their stead if they could not attend. A copy of the county's Jurisdictional Contact List is provided in *Appendix F Steering Committee Meetings*.

Meeting Participants: A total of 26 people attended the meeting. Representation included elected officials and departmental staff from Sibley County and all 8 cities covered by the county plan: Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, New Auburn, and Winthrop. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is included with this meeting summary.

Presentation Overview: The Power Point presentation covered the following items. A PDF of the presentation slides is included with this meeting summary.

- Overview of Hazard Mitigation & the MHMP Update
- Who the Plan Covers & Role of the Planning Team
- Review of Hazards + Overview of Risk Assessment and Vulnerability Analysis
- Update of Risk Priorities
- Review of Mitigation Strategies & Example Actions
- Overview of FEMA HMA grant program
- Discussion of local mitigation ideas
- Discussion of next steps & answer your questions.

Participant Poll: At the start of the meeting participants were presented with an interactive poll asking 2 questions. Following are the questions and poll results.

Question 1: Have you participated in Hazard Mitigation previously?

- Yes, I have previously participated in in a hazard mitigation planning process. **(8) 40%**
- No, but I am familiar with hazard mitigation planning. **(5) 25%**
- No, and this is all new to me. **(7) 35%**

Question 2: What are the top three natural hazards you are most concerned about in your community?

- Tornadoes: (14/20) 74%
- Winter Storms: (13/20) 65%
- Hail: (7/20) 35%
- Landslide: (5/20) 25%
- Extreme Cold: (3/20) 15%
- Lightning: (3/20) 15%
- Drought: (2/20) 10%
- Extreme Heat: (2/20) 10%
- Wildfire: (0/20) 0%

Note: Flooding was not included in poll since known as a high-risk hazard.

Prioritization of Natural Hazards: The planning team was presented with an overview of each of the natural hazards that were covered in the county’s last plan and the risk prioritization at that time. Considerations for the current risk prioritization since the last plan was presented for each hazard, such as events recorded since the last plan, NCEI Storm Data, or known existing local vulnerabilities (i.e., number of mobile home parks). It was noted to participants that:

- Hazards deemed to be of high or moderate risk must result in mitigation actions to address them for the jurisdictions that are affected.
- Hazard prioritization may vary for jurisdictions or may not differ countywide.
- Hazards deemed to be low risk and without significant mitigation actions may be dropped from the plan. This excludes the hazard of Dam/Levee failure, which must be addressed per new FEMA guidelines, even if risk is deemed low.

Following is a chart reflecting the 2015 risk priorities for Sibley County and any changes to the current risk prioritization for the plan update. This discussion served as an introduction to updating the risk prioritization and is meant to be informal and non-binding. Feedback will be followed up with further information gathered from the county and local jurisdictions during the planning process.

Natural Hazards Addressed in the Last Plan	2015 Priority	2020 Current Priority
Tornado	High	High
Flood	High	High
Windstorms	Moderate	Moderate to High 3-4/year significant wind events.
Hail	Moderate	Moderate - 4 hail storms since 2015 with 1" hail.
Lightning	Moderate	Low – Lightning strikes are common but there is a low occurrence of significant site damage
Winter Storms	Moderate	Moderate - 21 winter events that made the NCEI data base since 2015. About 3-4/year.

Extreme Cold	Moderate	Moderate – there are 2-3 extreme cold days/year (-18 or colder)
Extreme Heat	Moderate	Moderate - Over 90F 48 times since 2014. Heat related events .4 year
Drought	Moderate	Low to Moderate. Not a lot of evidence of drought compared to the rest of the state. From 2000 – 2018 Sibley was in drought about 25% of the time. In 2003 the county was part of a drought disaster.
Landslides	Low to Moderate	Low to Moderate Landslides do not widely occur across the county. City of Henderson had a disaster due to landslides in 2014.
Dam Failure	Low	Low
Land Subsidence	Not Addressed	Low – Not applicable for Sibley County.
Wildfire – Wildland Fire	Low to Moderate	Low

Comments, Questions or Mitigation Ideas – Following are the questions, comments or mitigation ideas that were shared by participants and how they will be addressed for the plan update.

Meeting Participant (by representation)	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
City of Gaylord	We have a mobile home park here in Gaylord. A storm shelter would be a good idea.	Noted for the City of Gaylord local mitigation action chart. We will follow up for additional information.
Sibley County Public Works Dept.	Property Acquisition/relocation should be considered with properties located along TH93 and CSAH 6.	Noted for the Sibley County mitigation action chart. We will follow up for additional information.
Sibley County Emergency Management	Shelters and sirens would be advisable for all three county parks.	Noted for the Sibley County mitigation action chart. We will follow up for additional information.
City of Gibbon	Clear Lake County Park is on the very west end of the county, south of Gibbon. We seem to have issues with being able to get there in a timely manner to advise campers of severe storms. Can we consider a weather siren out there?	Noted in addition to the County's comment on the need for warning sirens at county parks.

Meeting Participant (by representation)	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
McLeod County Emergency Management	Blowing snow on roadways during winter storms is a hazard. Mitigation action would be to plant and maintain living snow fences in high-risk areas.	Installation of living snow fences was shared as a mitigation action under the strategy of Natural Systems protection and should be considered for roadways of concern in winter.

Following the discussion, participants were encouraged to fill out and return the “Mitigation Ideas” worksheet that they were provided with to Sibley County Emergency Management to submit any specific local concerns and related mitigation ideas. The meeting concluded with an overview of next steps and estimated timeline for completion.

Post-Meeting Survey: Following the Zoom meeting, participants were provided with a short survey they were invited to fill out before upon their departure in order to gather some final feedback. The answers to these questions will assist in the determination of hazards to address in the plan update.

1. **Please comment on any known risk of land subsidence, landslides, wildfire and/or drought:**
 - Not really familiar yet with this community and area.
 - Highest concern is flooding and tornado in our area.
 - Landslides/gully erosion throughout the eastern portion of the County. Some areas just affect cropland but some do impact structures.

2. **Should lightning be included as a separate hazard section? (include if moderate risk)**
 - No (7)
 - Yes (1)

3. **Should hail be included as a separate hazard section? (include if moderate risk)**
 - No (0)
 - Yes (8)

Attached are the following documentation items for the Sibley County MHMP Meeting #1:

- 9-15-20 Mtg. #1 Email Invitation
- 9-15-20 Mtg. #1 List of Participants
- 9-15-20 Mtg. #1 Power Point Slides
- 9-15-20 Mtg. #1 Handouts

Meeting Summary Prepared By: Bonnie Hundrieser, U-Spatial@UMD Project Team

From: [Andrew Hayden](#)
To: [Adam Stegeman](#); [Joseph Ludowese](#); [Amy Newsom](#); [City Arlington](#); [Kirby Weckworth](#); [Sara Burton](#); [James Kuphal](#); [Jasper Kruggel](#); [Justin Nielsen](#); [Deb Paige](#); [Ann Traxler](#); [Kevin Mathews](#); [Justin Block](#); [Scott Haas](#); [Aaron Goemann](#); [Jeremy Templin](#); [Jesse Lutterman](#); [John Gilszczinski](#); [Klea Rettmann](#); [Marilee Peterson](#); [Patrick Nienaber](#); [Steve Saxton](#); [Tim Becker](#); [Tara McConnell](#); [Chief Charlie Fichten](#); [Lori Young](#); [Ty Reimers](#); [Sven Mattson](#); [Lonnie Seifert](#); [William Donnay](#); [Dana Lietzau](#); [David Kahle](#); [Delayne Pagel](#); [Dean Schons](#); [Gary Burdorf](#); [City Isle](#); [Frank Grimm](#); [Steve Herschman](#); [John Zaske](#); [Justin TenEyck](#); [City Auburn](#); [Tom Phillips](#); [Roger Trebbensee](#); [Troy Martin](#); [Kevin Wenniger](#); [Brandi Barrett](#); [Tim Haggemiller](#); [Dan Eibs](#); [Mike Opitz](#); [Randy Tiegs](#); [Lyle Forst](#); [Beverly Stueber](#); [Toby Bruns](#); [Wayne Grams](#); [Marlene Johnson](#); [Lyle Wiest](#); [Lon Berberich](#); [Ryna Hentges](#); [Mike Hennen](#); [Dale Schauer](#); [John Forst](#); [Jim Amsden](#); [Joel Wurscher](#); [Mark Marcy](#); [Doug Grindberg](#); [Scott Vos](#); [Jenny Palmer](#); cityclerk@winthropminnesota.com; [Karen Johnson](#); [Kenn Mueller](#); [Adam Leske](#); [Matthew Rabe](#)
Subject: Hazard Mitigation Planning Team Meeting #1

SIBLEY COUNTY

MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at a Planning Team Meeting for the update of the **Sibley County Multi-Hazard Mitigation Plan**. You are requested to participate in this vital meeting because you have a position of administrative or departmental responsibility within either the County, a municipal government, or are a key stakeholder related to the planning process. Emergency Managers from neighboring jurisdictions are also encouraged to attend so we may strengthen our shared mitigation efforts.

We will be holding the meeting using Zoom webinar:

Date: Tuesday, September 15, 2020

Time: 9:00 a.m. – 11:00 a.m.

Registration: https://umn-private.zoom.us/webinar/register/WN_Mt3zEt2yOrGJgP2WThQPIA

Please note that you must register in advance for this webinar. After registering, you will receive a confirmation email containing information about joining the webinar.

RSVP: Please email me to RSVP for all persons planning to attend this meeting so I may keep track. (This is separate from the Zoom registration link).

About the Plan

The update of the Sibley County Multi-Hazard Mitigation Plan (MHMP) is a requirement by the State of Minnesota Department of Homeland Security & Emergency Management (HSEM) as well as the Federal Emergency Management Agency (FEMA) every 5 years. Our last plan is due for an update and our planning is currently underway. The plan addresses the natural hazards that face Sibley County and will result in the identification of mitigation actions that will help to reduce or eliminate the impact of future hazard events, such as flooding and severe winter

or summer storms.

Your participation in this plan update is important for several reasons:

1. You will help to identify critical mitigation projects to implement at the county / municipal level, and how they can be integrated with existing plans, policies, or project efforts.
2. Participating jurisdictions will be eligible to apply for FEMA hazard mitigation grant funding.
3. Mitigation planning is necessary to keep our communities resilient against future disasters and reduce the costs of recovery.
4. FEMA requires documentation of how local government and key stakeholders participated in the planning process.

During this meeting we will review and prioritize the natural hazards that pose risk Sibley County and individual communities and discuss a range of mitigation measures for local implementation. The meeting will be facilitated by personnel from U-Spatial at the University of MN Duluth who are working closely with us on this project.

We look forward to you joining us for this important meeting.

Thank you,

Deputy Andrew Hayden
Sibley County Emergency Management Director

Sibley County Sheriff's Office
419 Harrison St
PO BOX 102
Gaylord MN, 55334

Desk 507-237-7817
Cell 507-227-2306
Emergency 507-237-4330 or 911

From: [Andrew Hayden](#)
To: [Adam Stegeman](#); [Joseph Ludowese](#); [Amy Newsom](#); [City Arlington](#); [Kirby Weckworth](#); [Sara Burton](#); [James Kuphal](#); [Jasper Kruggel](#); [Justin Nielsen](#); [Deb Paige](#); [Ann Traxler](#); [Kevin Mathews](#); [Justin Block](#); [Scott Haas](#); [Aaron Goemann](#); [Jeremy Templin](#); [Jesse Lutterman](#); [John Glisczinski](#); [Klea Rettmann](#); [Marilee Peterson](#); [Patrick Nienaber](#); [Steve Saxton](#); [Tim Becker](#); [Tara McConnell](#); [Chief Charlie Eichten](#); [Lori Young](#); [Ty Reimers](#); [Sven Mattson](#); [Lonnie Seifert](#); [William Donnay](#); [Dana Lietzau](#); [David Kahle](#); [Delayne Pagel](#); [Dean Schons](#); [Gary Burdorf](#); [City Isle](#); [Frank Grimm](#); [Steve Herschman](#); [John Zaske](#); [Justin TenEyck](#); [City Auburn](#); [Tom Phillips](#); [Roger Trebbensee](#); [Troy Martin](#); [Kevin Wenniger](#); [Brandi Barrett](#); [Tim Haggemiller](#); [Dan Eibs](#); [Mike Opitz](#); [Randy Tieg](#); [Lyle Forst](#); [Beverly Stueber](#); [Toby Bruns](#); [Wayne Grams](#); [Marlene Johnson](#); [Lyle Wiest](#); [Lon Berberich](#); [Ryna Hentges](#); [Mike Hennen](#); [Dale Schauer](#); [John Forst](#); [Jim Amsden](#); [Joel Wurscher](#); [Mark Marcy](#); [Doug Grindberg](#); [Scott Vos](#); [Jenny Palmer](#); cityclerk@winthropminnesota.com; [Karen Johnson](#); [Kenn Mueller](#); [Adam Leske](#); [Matthew Rabe](#)
Subject: Sibley County Hazard Mitigation Planning Meeting #1
Attachments: [Mitigation Ideas Worksheet.docx](#)
[HSEM HMA Grants Program Overview.pdf](#)
[Mitigation Strategies Action Types.pdf](#)

Greetings,

We look forward to you joining us for the Sibley County Multi-Hazard Mitigation Plan meeting tomorrow, Tuesday, September 15th from 9am – 11am.

Attached please find 3 handouts we will be referencing during the meeting.

If you have not registered yet, please do so by clicking on the following link: https://umn-private.zoom.us/webinar/register/WN_Mt3zEt2yQrGJgP2WThQPJA

Thank you,

Deputy Andrew Hayden
Sibley County Emergency Management Director

Sibley County Sheriff's Office
419 Harrison St
PO BOX 102
Gaylord MN, 55334

Desk 507-237-7817
Cell 507-227-2306
Emergency 507-237-4330 or 911

Sibley County

9/15/20 MHMP Planning Team Meeting #1

List of Participants (26)

	Organization	First Name	Last Name	Job Title	Email
1	Sibley County	Andrew	Hayden	Emergency Management Director	AndrewH@co.sibley.mn.us
2	Sibley County	Patrick	Nienaber	Sheriff	pat@co.sibley.mn.us
3	Sibley County	Tim	Becker	Public Works Director	timb@co.sibley.mn.us
4	Sibley County	Joel	Wurscher	SWCD District Manager	joel.wurscher@sibleyswcd.org
5	Sibley County	Bobbie	Harder	County Commissioner	bobbieh@co.sibley.mn.us
6	Sibley County	Scott	Beebe	Drainage System Manager	ScottBeebe@co.sibley.mn.us
7	Sibley County	Jesse	Lutterman	GIS Coordinator	jessel@co.sibley.mn.us
8	City of Arlington	Amy	Newsom	City Administrator	anewsom@arlingtonmn.com
9	City of Arlington	John	Zaske	Fire Chief	john.zaske@ridgeviewmedical.org
10	City of Arlington	Jaime	Weikle	Ambulance Manager	jweikle@arlingtonmn.com
11	City of Arlington	Andrew	Konechne	Chief of Police	akonechne@arlingtonmn.com
12	City of Gaylord	Charlie	Eichten	Chief of Police	ceichten@exploregaylord.org
13	City of Gibbon	Dana	Lietzau	City Administrator	cityofgibbon@gmail.com
14	City of Green Isle	Scott	Vos	Fire Chief	scott@vosconstruction.com
15	City of Henderson	Tom	Phillips	City Emergency Manager	Tmphilips049@gmail.com
16	City of Le Sueur	Jasper	Kruggel	City Administrator	jkruessel@cityoflesueur.com
17	City of Le Sueur	Justin	Nielsen	Emergency Manager	jnielsen@cityoflesueur.com
18	City of New Auburn	Roberta	Zaske	City Clerk-Treasurer	newauburn.city@gmail.com
19	City of Winthrop	Jenny	Palmer	Administrator	administrator@winthropminnesota.com
20	MN DPS/HSEM	Mark	Marcy	Regional Coordinator	mark.marcy@state.mn.us

	Organization	First Name	Last Name	Job Title	Email
21	Le Sueur-Henderson Public Schools ISD #2397	Marlene	Johnson	Superintendent of LSH	marlene.johnson@isd2397.org
22	Sibley East Schools ISD #2310	Jim	Amsden	Superintendent	jim.amsden@sibleyeast.org
23	MN Valley Electric Cooperative	Chad	Briese	Director of Safety/ Environmental Compliance	chadb@mvec.net
24	USDA Rural Development	Doug	Grindberg	Area Specialist	douglas.grindberg@usda.gov
25	Le Sueur County	Ann	Traxler	Emergency Management Director	atraxler@co.le-sueur.mn.us
26	McLeod County	Kevin	Mathews	Emergency Management Director	kevin.mathews@co.mcleod.mn.us

SIBLEY COUNTY Multi-Hazard Mitigation Plan Update 2020 Planning Team Meeting #1

September 15, 2020



U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
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Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HM Planning Specialist
Hundrieser Consulting LLC

Sibley County Project Lead

- Andrew Hayden, Sibley County
Emergency Management Director



PRESENTER: STACEY STARK

Webinar Logistics

YOU ARE UNABLE TO UNMUTE YOURSELF OR TURN YOUR VIDEO ON

USE CHAT:

- Send a message to everyone or individuals
- Send a message to "panelists" for technical support for a question that isn't for the whole group. The "Panelist" Group includes Bonnie, Stacey, and your County EM and hosts.



USE Q&A (all participants can see these)

- PLEASE USE Q and A for all notes about hazards and mitigation. A question as soon as we can
- You can review others' questions and "upvote" their question if you have the same one
- You can comment on others' questions



RAISE YOUR HAND

If you want to speak



USE LIVE TRANSCRIPT

To view live subtitles or a full transcript



PRESENTER: STACEY STARK

Why U-Spatial?

U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Proven experience

Our updates of 30+ MHMPs, as well as the State MHMP, have been quickly approved by FEMA and adopted by counties.

Advanced Capabilities

Expertise in the application of GIS, HAZUS, and research supports plan development and meeting all FEMA requirements.

Ability to Expedite

A consistent and proven approach for multiple counties supports State & FEMA review of draft plans.

Planning Team

Our project team includes advanced GIS students and Hundrieser Consulting.



PRESENTER: STACEY STARK

Meeting Purpose & Agenda



July 1, 2018 Henderson area flooding

The purpose of this meeting is to formally convene the Sibley County MHMP Planning Team for a presentation of the plan update and discussion of key items.

Agenda:

- Overview of Hazard Mitigation & the MHMP Update
- Who the Plan Covers & Role of the Planning Team
- Review of Hazards + Overview of Risk Assessment and Vulnerability Analysis
- Update of Risk Priorities
- Review of Mitigation Strategies & Example Actions
- Overview of FEMA HMA grant program
- Discuss local mitigation ideas & public engagement.
- Discuss next steps & answer your questions.



PRESENTER: STACEY STARK

What is Hazard Mitigation?

Hazard Mitigation is any action taken to reduce or eliminate long term risk to people and property from natural disasters.

- HM planning identifies risks and vulnerabilities, develops a plan of action, and builds partnerships to implement efforts.
- HM breaks the cycle of disaster and reconstruction.
- HM builds stronger & more resilient communities.



PRESENTER: BONNIE HUNDRIESER

MHMP Overview & Timeline



The Multi-Hazard Mitigation Plan (MHMP) is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000).

- ✓ The development of a local government plan is required in order to maintain eligibility for FEMA hazard mitigation grant programs.
- ✓ Plans must be updated every 5 years.
- ✓ Must address all jurisdictions and engage key stakeholders.
- ✓ Planning process must give an opportunity to the public to provide feedback.

Sibley County MHMP Update 2020

- Last plan adopted in 2015.
- The updated plan will cover a 5-year window (2021-2026).
- County and local-level government participation is required.

PRESENTER: BONNIE HUNTER-REISER

Who the Plan Covers



The Sibley County MHMP is a multi-jurisdictional plan that covers the county as well as all city & townships within the county.

- ✓ County and city governments are required to adopt the plan.
- ✓ Townships are covered under the umbrella of the county, but may elect to adopt.
- ✓ City-level participation in the plan update must be documented for local adoptions to be approved.



PRESENTER: BONNIE HUNTER-REISER

MHMP Planning Team



Sibley County Planning Team

- Sibley County Emergency Management
- Key County Officials & Staff
- City and Township Officials & Staff
- Neighboring Jurisdictions
- Other Related Agency or Organizational Stakeholders

- Assist with public outreach & documentation for news releases (use of websites, social media & community bulletin boards).
- Participate in 2 planning team meetings.
- Assist with provision of county/local information
- Help develop & review local mitigation action charts.
- Review of the draft plan.
- Facilitate local-level adoptions.

PRESENTER: BONNIE HUNTER-REISER

What Hazards are Addressed in the Plan?



➢ Natural hazards that pose risk to the county and its jurisdictions.

➢ Manmade hazards are not required to be addressed (per the DMA 2000).

➢ Hazards may be omitted from the plan if **low risk** is demonstrated.

➢ Hazard Risk may differ in cities and the county overall.

Flooding	Hail	Drought
Dam/Levee Failure	Lightning	Extreme Heat
Wildfire	Winter Storms	Extreme Cold
Windstorms	Landslides	Earthquakes
Tornadoes	Sinkholes & Karst	Coastal Erosion

Natural hazard categories for Minnesota MHMPs.

PRESENTER: STACEY STARK

Hazard Risk Assessment and Vulnerability Analysis

The U-Spatial@UMD Team will work closely with the county and each city to provide information as needed.

- Inventory of critical infrastructure.
- Identify specific, local-level impacts and vulnerabilities.
- Identify any factors (i.e., new development) that may increase the community's vulnerability.
- Review social vulnerability factors.
- Identify if and how risk priorities have changed since the last plan. (Increased / Decreased)



July 9, 2017, Hail Damage, Winthrop

PRESENTER: STACEY STARK

Hazard Prioritization

Hazards Addressed In 2014 HMP	2014 priority	Comments
Tornado	High	
Flood	High	Required by HSEM
Extreme Temperatures (Extreme Heat, Extreme Cold)	Moderate	In 2020 – will be separated
Winter Storms	Moderate	
Landslide	Low to Moderate	
Summer Storms (Wind, Hail, Lightning)	Moderate	In 2020 – will be separated
Dam Failure	Low	Required by HSEM
Land Subsidence	Low	Not Addressed
Wildfire	Low to Moderate	
Drought	Moderate	

Tornadoes (high)



- Based on NCEI Storm Events Database through February 2020, the relative frequency of tornadoes in Sibley County is .45 per year
- Recent tornadoes in 2017, 2019 (multiple)
- Identify mobile home locations



PRESENTER: STACEY STARK

Flood (high)



- A potential economic loss model is run for 1% annual chance flood
- Use of FEMA Flood Insurance Rate Map (FIRM)
- Use of property values from county assessor
- Critical Infrastructure locations from GIS and EM input



Distribution of Estimated Economic Loss: 1% annual chance flood, from 2015 HMP

PRESENTER: STACEY STARK

Hail, Windstorms, Lightning (moderate)



- Each addressed individually
- Hazards deemed low risk and without significant mitigation actions, can be dropped from the plan.
- The relative frequency of all wind-related events since January of 1996 is 3.7 per year. Several 45-55 mph windstorms in 2019.
- There were four hailstorms with hail greater or equal to 1-inch since 2015. The relative frequency of all hail events is 1.5 per year.



PRESENTER: STACEY STARK

Winter Storms (moderate)



- 21 winter weather related events (blizzards, heavy snows, ice storms, winter storms, and winter weather) have occurred since January 2015 (3.5 year)
- Based on all records in the NCEI Storm Events Database, the relative frequency of winter-related storm events is 3.7 per year.



PRESENTER: STACEY STARK

Extreme Cold (moderate)



- From 2014 - 2020, daily low temperatures $\leq -18^{\circ}\text{F}$ were recorded 13 times at the Gaylord weather station. Sibley County experiences an average of 2-3 extreme cold days each year.
- -29°F recorded by the Gaylord station on January 31, 2019
- The relative frequency of cold-related events (NWS Warning issued due to wind chill of -35°F or colder) in Sibley County is .8 per year

PRESENTER: STACEY STARK

Extreme Heat (moderate)



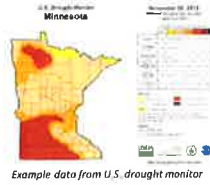
- From 2014 - 2020, the Gaylord weather station reported daily high temperatures $\geq 90^{\circ}\text{F}$ 48 times (8 days/year).
- An excessive heat event occurred on July 20, 2016, when heat indices across Sibley County rose over 105°F for several hours on two days.
- Since January 1996, 6 heat events (heat index 100°F) and three excessive heat events (heat index 105°F) occurred. The relative frequency of heat-related events in the county is .4 per year.

PRESENTER: STACEY STARK

Drought (moderate)



- The county was part of a 2003 USDA designation as a primary agricultural disaster area due to drought.
- From 2000 – 2018, Sibley County was in Moderate (D1) Drought < 25% of the time.
- Hazards deemed low risk and without significant mitigation actions, can be dropped from the plan.



PRESENTER: STACEY STARK

Landslides (low to moderate)



- Major Mudslides occurred around Henderson in June 2014. These flooding and mudslide events were part of FEMA disaster declaration DR-4182, issued on July 21, 2014.
- County prioritization can differ from jurisdictional prioritization

PRESENTER: STACEY STARK

Wildfire – Wildland Fire (low to moderate)



- Between 1985 and April 2014, five (5) wildfires have been tracked by the Minnesota DNR in Sibley County. Only one was greater than 4 acres.
- Hazards deemed low risk and without significant mitigation actions, can be dropped from the plan.



PRESENTER: STACEY STARK

Review of Mitigation Strategies & Example Actions



See Handout: Mitigation Strategies & Action Types

PRESENTER: BONNIE HUNDRESER

#1 - Local Planning & Regulations



These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.

EXAMPLES:

- Establishing & enforcing floodplain & shoreland ordinances
- Participating in the NFIP
- Developing stormwater management plans
- Long-term planning for infrastructure improvements
- Working with MHP operators to be in compliance with State statutes for storm shelters & evacuation plans.



PRESENTER: BONNIE HUNDRESER

#2 – Structure and Infrastructure Projects



These actions involve modifying existing structures to protect them from a hazard or remove them from a hazard area. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.

EXAMPLES:

- Property acquisitions (repetitive flooding/erosion risk)
- Structural elevations (flooding)
- Utility undergrounding
- Constructing floodwalls & retaining walls
- Improving culverts, roads & bridges
- Green infrastructure projects
- Safe room construction or retrofit



PRESENTER: BONNIE HUNDRESER

Community Safe Rooms
Wadena-Deer Creek School, June 17 2010



PRESENTER: BONNIE HUNDRIEGER

August, 2012 – 1st school based
tornado safe room (Wadena)



PRESENTER: BONNIE HUNDRIEGER

Power Line retrofit/burial



PRESENTER: BONNIE HUNDRIEGER

#3 – Natural Systems
Protection



These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.

EXAMPLES:

- Slope management for soil stabilization
- Shoreland restoration
- "Living Fences" for wind/erosion reduction or snow buffer
- Forest management for wildfire mitigation (fuels reduction)
- Flood diversion and storage



PRESENTER: BONNIE HUNDRIEGER

#4 – Education & Awareness
Programs

These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them.

EXAMPLES:

- Promoting sign-up for emergency notifications
- Educate on use of outdoor warning sirens and response
- Participation in the NWS Severe Weather Awareness Weeks
- SKYWARN Storm Spotter Training
- Turn Around Don't Drown
- Promoting personal & family emergency preparedness (i.e. Ready.gov)



PRESENTER: BONNIE HUNDRIEGER

#5 – Mitigation Preparedness
& Response Support

These are actions that help to protect life and property prior to, during, and immediately after a disaster or hazard event.

EXAMPLES:

- Emergency Notification Systems
- Emergency Operations Plans
- Outdoor warning sirens
- Shelter Planning
- Flood fight plans & equipment
- Training local elected officials in EM responsibilities
- Emergency backup generators for critical facilities



PRESENTER: BONNIE HUNDRIEGER

FEMA HMA Grant Program

See Handout: HSEM HMA Grants Program Overview

- ✓ All applicants must have or be covered under an approved MHMP.
- ✓ Eligible applicants: State & local governments, Tribal Communities, and certain private non-profit organizations or institutions.
- ✓ Cost Share: Federal 75%/ Applicant 25%
- ✓ Eligible projects must be identified in the local MHMP.

Examples of Eligible Activities

- Property Acquisition/Relocation
- Safe Room Construction
- Minor Localized Flood Risk Reduction
- Green Infrastructure
- Infrastructure Retrofits
- Soil Stabilization
- Wildfire Mitigation
- 5% Initiative Projects

PRESENTER: BONNIE HUNDRESER

Historical Projects in Sibley County Resulting from HMA Funding since 2010

DR / project #	subrecipient	project type	100% project cost	Federal share (%75)	local match (%25)
4069.01	Sibley County	plan update	\$40,000.00	\$30,000.00	\$10,000.00
4290.6	Sibley County	acquisition	\$100,000.00	\$75,000.00	\$25,000.00

PRESENTER: BONNIE HUNDRESER

Mitigation Ideas

Do you have questions or ideas to share about local hazards & vulnerabilities and proposed mitigation actions?

See Handout: Mitigation Ideas Worksheet

PRESENTER: BONNIE HUNDRESER



Fall 2020

Completion of Local Mitigation Survey (LMS) Forms

- Local hazard identification & risk prioritization.
- Local vulnerabilities (critical infrastructure, populations or assets)
- Local capabilities (programs, policies, staff, funding)
- Local mitigation projects.

PRESENTER: BONNIE HUNDRESER



Winter 2020

Development of Local Mitigation Action Charts

- County and City-Specific MACs
- 5-year window (2021-2026)
- Mitigation actions must address high and moderate risk hazards.
- Seek to include actions eligible for FEMA HMA grant funding.
- Mitigation actions must be informed by hazards of risk, as well as local capabilities & existing planning mechanisms.

PRESENTER: BONNIE HUNDRESER



Winter 2020-Spring 2021

Draft Plan Development & Initial Review

- Updated risk assessment & vulnerability analysis
- Development of hazard profiles (history, probability, impacts of climate change)
- GIS mapping
- HAZUS analysis
- EM initial review of draft plan

PRESENTER: BONNIE HUNDRESER



Spring-Summer 2021

Planning Team Meeting #2 and Public Review & Comment Period

- Hold Planning Team Mtg. #2 – presentation of draft plan and final review of Mitigation Action Charts.
- Disseminate & document news release by county and jurisdictions.
- Conduct draft plan review.
- Document local outreach and feedback.

PRESENTER: BONNIE HUNDRIESER



Fall-Winter 2021

Draft Plan Submission to HSEM & FEMA for Approval

- Draft plan will be submitted first to HSEM and then to FEMA for approval for meeting all Federal requirements.
- Typically requires 1-2 months.
- APA letter
- EM coordination of adopting resolutions

PRESENTER: BONNIE HUNDRIESER

Questions?

What questions do you have for U-Spatial@UMD about the MHMP update process?

PRESENTER: STACEY STARK

Contact Information

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UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover


HUNDRIESER
CONSULTING LLC

PRESENTER: STACEY STARK

Mitigation Strategies & Action Types

Following are the five types of mitigation strategies that will be used in the update of the Multi-Hazard Mitigation Plan with examples of related mitigation actions. Minnesota HSEM recommends the use of these mitigation strategies to be in alignment with the State plan and those recommended by FEMA. The first four strategies listed are taken from the FEMA publications *Local Mitigation Planning Handbook* (2013) and *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (2013). The fifth strategy type was determined by Minnesota HSEM for use within the state.

These strategies will provide the framework for identification of new jurisdictional-level mitigation actions for implementation over the next 5-year planning cycle.

Mitigation Strategy	Description	Example Mitigation Actions
Local Planning and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.	<ul style="list-style-type: none"> • Comprehensive plans • Land use ordinances • Planning and zoning • Building codes and enforcement • Floodplain ordinances • NFIP Community Rating System • Capital improvement programs • Open space preservation • Shoreline codes • Stormwater management regulations and master plans • Mobile home park compliance for storm shelters
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p>	<ul style="list-style-type: none"> • Property Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits (i.e., metal roofs) • Floodwalls and retaining walls • Detention and retention structures • Culvert Installation/Modification • Roads & Bridge risk reduction • Safe Room (New construction or facility retrofit) • Green Infrastructure Methods <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>

Mitigation Strategy	Description	Example Mitigation Actions
<p>Natural Systems Protection</p>	<p>These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> • Soil stabilization for sediment and erosion control • Floodplain and Stream corridor restoration • Slope management • Forest management (defensible space, fuels reduction, sprinkler systems) • Conservation easements • Wetland restoration and preservation • Aquifer Storage & Recovery • Flood Diversion and Storage <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>
<p>Education and Awareness Programs</p>	<p>These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions that support life safety and lessen property damage.</p>	<ul style="list-style-type: none"> • Radio or television spots • Websites with maps and information • Social media outreach • Promotion of sign-up for emergency warnings • Real estate disclosure • Promotion of NFIP insurance to property owners • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas. • NWS StormReady Program • Firewise Communities <p><i>Some of these types of actions may be projects eligible for funding through the FEMA HMA "5 Percent Initiative Program".</i></p>
<p>Mitigation Preparedness and Response Support</p>	<p>This is a State of Minnesota mitigation strategy with the intent of covering emergency preparedness actions that protect life and property prior to, during, and immediately after a disaster or hazard event. These activities are typically not considered mitigation, but support reduction of the effects of damaging events.</p>	<ul style="list-style-type: none"> • Emergency Operations Plan • Flood fight plans and preparedness measures • Dam emergency action plans • Emergency Warning Systems (i.e., CodeRed, warning sirens) • Generator backup power • NWS Storm Spotter Training • Training and education for local elected officials and key partners.



HAZARD MITIGATION ASSISTANCE

Hazard Mitigation Assistance (HMA) grant programs provide funding with the aim to reduce or eliminate risk to property and loss of life from future natural disasters. HMA programs are typically a 75%/25% cost share program. The federal share is 75% of total eligible project reimbursement costs. The local applicant is responsible for 25% of the project costs. The amount of HMGP funds availability is based on a percent of Public Assistance provided by Federal Emergency Management Agency (FEMA).

- Hazard Mitigation Grant Program (HMGP) funds assists in implementing long-term hazard mitigation measures following a Presidential major disaster declaration.
- Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and projects on an annual basis.
- Flood Mitigation Assistance (FMA) provides funds on an annual basis to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP).

Who is eligible for grant funding?

All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include: State and local governments; certain private non-profit organizations or institutions; and Tribal Communities

What types of projects can be funded?

All projects must be eligible, technically feasible, and cost-effective. All projects are subject to environmental and cultural resource review. Examples of projects include:

- **Advance Assistance** may be used to develop mitigation strategies and obtain data, including for environmental and historic preservation compliance considerations, and develop complete project applications in a timely manner.
- **Aquifer Storage and Recovery (ASR)** projects serve primarily as a drought management tool, but can also be used to reduce flood risk and restore aquifers that have been subject to overdraft. The concept is to capture water when there is an abundant supply, store the water in subsurface aquifers, and recover water from the storage aquifer when needed. Storing water underground can help protect it from pollutants, evaporation, and weather events.
- **Floodplain and stream restoration (FSR)** projects are used primarily to reduce flood risk and erosion by providing stable reaches, and may also mitigate drought impacts. FSR projects restore and enhance the floodplain, stream channel and riparian ecosystem's natural function. They provide base flow recharge, water supply augmentation, floodwater storage, terrestrial and aquatic wildlife habitat, and recreation opportunities by restoring the site's soil, hydrology and vegetation conditions that mimic pre-development channel flow and floodplain connectivity.
- **Flood Diversion and Storage (FDS)** projects often are used to reduce flood risk, but also can be used to mitigate drought and improve ecosystem services. These projects involve diverting floodwaters from a stream, river, or other body of water into a conduit such as a canal, pipe, or wetland and storing them in an above-ground storage facility. Water is then slowly released, reducing flood risk.

- **Green Infrastructure Methods** are a sustainable approach to natural landscape preservation and storm water management. Include in *eligible hazard mitigation activities* as well as provide additional ecosystem benefits. Ecosystem-based approach to replicate a site's pre-development, natural hydrologic function. Benefits include: Increase water supply, improved water quality, can be scaled to size and designed to fit site conditions.
- **Property Acquisition and Structure Demolition or Relocation** – The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.
- **Retrofit Flood-Prone Residential Structures** are changes made to an existing structure to reduce or eliminate the possibility of damage to that structure from flooding, erosion, or other hazards. Examples of this mitigation are primarily elevation of structures above flood levels and floodwalls.
- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities
- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or up-sizing of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.
- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.
- **Soil Stabilization** - Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies. *New tools for Bioengineered Shoreline Stabilization, Bioengineered Streambank Stabilization.*
- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction. *New tool for Bioengineered Wildfire Mitigation.*
- **HMGP only - 5 Percent Initiative Projects** – These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of approved mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.

How do I apply?

Start by submitting a Notice of Interest, available on HSEMs website at:

<https://dps.mn.gov/divisions/hsem>

Where can I obtain further information?

For additional information about the HMA grant program, you can refer to the FEMA website:

<http://www.fema.gov/hazard-mitigation-assistance>

MITIGATION IDEAS WORKSHEET

Please use the following worksheet to list your ideas for mitigation actions that you feel will help reduce the impact of future natural hazard events to the county or to your jurisdiction. Following the MHMP planning team meeting, please return this form via email to your county Emergency Manager to submit your feedback.

NAME OF JURISDICTION:

CONTACT INFORMATION

Name:

Phone:

Email:

Hazard	Description of Concern or Proposed Mitigation Action

Sibley County MHMP Planning Team Meeting #2 October 1, 2021 - Meeting Summary & Documentation

Summary: On Friday, October 1, 2021, Sibley County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 2nd and final Planning Team Meeting for the update of the Sibley County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally convene the Sibley County MHMP Planning Team for a presentation on the draft plan and discussion of key items prior to public review and submission of the plan to HSEM and FEMA. The meeting was held via Zoom webinar video conference and was facilitated by Stacey Stark and Bonnie Hundrieser of the U-Spatial@UMD project team.

Stakeholder Invitations: Sibley County Emergency Management invited all stakeholders included on the county's MHMP Update Jurisdictional Contact List (JCL), which includes the key County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts identified to be invited to participate in the plan update process. Contacts were encouraged to engage additional staff or to send someone in their stead if they could not attend. A copy of the county's Jurisdictional Contact List is provided in *Appendix F Steering Committee Meetings*.

Meeting Participants: A total of 23 people attended the meeting. Representation included departmental staff from Sibley County and the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, . The city of Winthrop was not in attendance. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is included with this meeting summary.

Presentation Overview: The PowerPoint presentation covered the following items about the process and content of the plan update. A PDF of the presentation slides is included with this meeting summary.

- Meeting Purpose and Agenda
- About the Project Team
- Overview of Plan Update
- Who the Plan Covers
- Who Needs to Participate
- Prioritization of Hazards
- Hazards Risk Assessment (Critical Infrastructure, Population Vulnerability Factors, and Review of High/Moderate Priority Natural Hazards)
- Development of Mitigation Actions
- FEMA HMA Grant Funding
- Overview of Mitigation Action Charts and Discussion
- Discussion of Next Steps & answer your questions

The opening PowerPoint presentation covered a re-cap of key points about the plan update, a review of the Risk Assessment & Vulnerability Analysis, an overview of FEMA Hazard Mitigation Assistance (HMA) grant funding; an overview of how mitigation actions are developed and an overview of the jurisdictional Mitigation Action Charts (MACs). Following the presentation, participants were provided with an opportunity to review and discuss the county and local mitigation action charts. This discussion period offered a facilitated opportunity for participants to consider any changes or new additions to the MACs prior to completion of the draft plan for public review.

Discussion Notes: Following is an overview of key discussion points, questions, or mitigation ideas that were shared during the presentation and how they will be incorporated into the plan update.

- There were no questions or comments for discussion during the meeting to be documented.

Meeting Conclusion: The meeting concluded with an overview and timeline of the upcoming next steps of posting the plan for public review and input and submitting the draft plan to HSEM and FEMA for final review and approval.

Exit Survey: Following the Zoom meeting, participants were provided with a short survey they were invited to fill out before upon their departure in order to gather some final feedback.

1. Thank you for attending! Did this webinar meet your expectations?

Yes (10), No (0), Not sure (0)

2. Do you have any comments about hazards or mitigation actions? Do you have any questions for the consultants?

- Not at this time.
- Excellent job as always.
- No, thank you.
- It sounded like a comprehensive list, with good action steps. Thank you for your good work!!
- No comments but the presenters did a very nice job with all the information. Thank you!

Attached are the following documentation items for the Sibley County MHMP Meeting #2:

- 10-1-21 Mtg. #2 Email Invitation
- 10-1-21 Mtg. #2 List of Participants
- 10-1-21 Mtg. #2 Power Point Slides
- 10-1-21 Mtg. #2 Handouts

Meeting Summary Prepared By: Bonnie Hundrieser, U-Spatial@UMD Project Team

From: [Andrew Hayden](#)
To: [Joseph Ludowese](#); [Amy Newsom](#); [City Arlington](#); [Kirby Weckworth](#); [James Kuphal](#); [Jasper Kruggel](#); [Justin Nielsen](#); [Deb Paige](#); [Ann Traxler](#); [Kevin Mathews](#); [Justin Block](#); [Scott Haas](#); [Bobbie Harder](#); [Jeremy Templin](#); [Jesse Lutterman](#); [John Glisczinski](#); [Klea Rettmann](#); [Marilee Peterson](#); [Patrick Nienaber](#); [Steve Saxton](#); [Tim Becker](#); [Tara McConnell](#); [Chief Charlie Eichten](#); [Steve Helget](#); [Sara Burton](#); [Ty Reimers](#); [Sven Mattson](#); [Lonnie Seifert](#); [Adam Stegeman](#); [William Donnav](#); [Dana Lietzau](#); [David Kahle](#); [Delayne Pagel](#); [Dean Schons](#); [Gary Burdorf](#); [City Isle](#); [Frank Grimm](#); [Steve Herschman](#); [John Zaske](#); [Justin TenEyck](#); [City Auburn](#); [Tom Phillips](#); [Roger Trebbensee](#); [Troy Martin](#); [Kevin Wenniger](#); [Brandi Barrett](#); [Tim Haggemiller](#); [Dan Eibs](#); [Randy Tiegs](#); [Lyle Forst](#); [Beverly Stueber](#); [Toby Bruns](#); [Wayne Grams](#); [Marlene Johnson](#); [Lyle Wiest](#); [Lon Berberich](#); [Ryna Hentges](#); [Mike Hennen](#); [Dale Schauer](#); [John Forst](#); [Jim Amsden](#); [Joel Wurscher](#); [Mark Marcy](#); [Doug Grindberg](#); [Scott Vos](#); [Jenny Palmer](#); [cityclerk@winthropminnesota.com](#); [Karen Johnson](#); [Kenn Mueller](#); [Adam Leske](#); [Matthew Rabe](#)
Cc: [Bonnie K Hundrieser](#)
Subject: MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION
Date: Wednesday, September 15, 2021 2:50:38 PM

SIBLEY COUNTY

MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at the **2nd Planning Team Meeting** for the update of the **Sibley County Multi-Hazard Mitigation Plan (MHMP)**. This meeting will be the final planning meeting for the hazard mitigation planning process for the county, city jurisdictions, and other stakeholders.

You are requested to participate in this vital meeting because you have a position of administrative or departmental responsibility within either the county, a municipal government, or are a key stakeholder related to the planning process. Emergency Managers from neighboring jurisdictions are also encouraged to attend so we may strengthen our shared mitigation efforts.

We will be holding the meeting virtually using Zoom video/phone conferencing:

Date: Friday, October 1, 2021

Time: 9:00 a.m. – 11:00 a.m.

Zoom Link: https://umn-private.zoom.us/webinar/register/WN_ab3VL6gWS8-D8Lw8ypuuNg

You must click on the link above to register. (Ctrl + click to follow link)

The purpose of this meeting is to provide a final overview of the plan, including a review of the updated risk assessment for natural hazards that affect the county (history, local vulnerabilities, and future trends). We will also discuss the Mitigation Action Charts that have been developed for Sibley County and each city, as well as funding opportunities for eligible projects under the FEMA Hazard Mitigation Assistance grant program. Your participation in this meeting and feedback on the draft plan is important to us. The draft Sibley County MHMP is underway and will be ready for review by planning team members and the public following this meeting.

When you register, you will automatically be placed on an RSVP list. Please be sure to include the name, title and representation (jurisdiction/agency) for all persons planning to attend the meeting.

Thank you,

Deputy Andrew Hayden
Sibley County Emergency Management Director

Sibley County Sheriff's Office
419 Harrison St
PO BOX 102
Gaylord MN, 55334

Desk 507-237-7817
Cell 507-227-2306
Emergency 507-237-4330 or 911

Sibley County

10/1/21 MHMP Planning Team Meeting #2

List of Participants (23)

	First Name	Last Name	Organization	Job Title
1	Andrew	Hayden	Sibley County Sheriff's Office	Emergency Management Director
2	John	Glisczinski	Sibley County	County Administrator
3	Steve	Saxton	Sibley County	County Commissioner
4	Marilee	Peterson	Sibley County	Auditor-Treasurer
5	Jesse	Lutterman	Sibley County	GIS Coordinator
6	Lon	Berberich	City of Henderson	City Administrator
7	Tom	Phillips	City of Henderson	Emergency Manager
8	Jason	Rettig	City of Gibbon	Public Works Director
9	Amy	Newsom	City of Arlington	City Administrator
10	Kirby	Weckworth	City of Arlington	Maintenance Supervisor
11	Justin	Nielsen	City of Le Sueur	Building Official/Emergency Manager
12	Joey	Schuft	City of New Auburn	Maintenance Supervisor
13	Charlie	Eichten	City of Gaylord Police Dept.	Chief of Police
14	Scott	Vos	City of Green Isle Fire-Rescue	Fire Chief
15	Roberta	Zaske	City of New Auburn	City Clerk-Treasurer
16	Adam	Stegeman	Bismarck Township	Clerk
17	Dale	Schauer	New Auburn Township	Supervisor
18	Mark	Marcy	MN DPS/HSEM	Regional Coordinator
19	Joe	Green	MN Valley Electric Cooperative	Key Account Rep./Community Relations
20	Ann	Traxler	Le Sueur County Emergency Management	Emergency Management Director
21	Tammy	Stewig	Le Sueur County Emergency Management	Deputy Director
22	Kevin	Mathews	McLeod County Emergency Management	Emergency Management Director
23	Mike	Hennen	Renville County Emergency Management	Emergency Management Director

SIBLEY COUNTY Multi-Hazard Mitigation Plan Update 2021 Planning Team Meeting #2

OCTOBER 1, 2021



U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HM Planning Specialist
Hundrieser Consulting LLC

Sibley County Project Lead

- Andrew Hayden, Sibley County
Emergency Management Director



Please type your name and jurisdiction in the CHAT – so others know who is here

PRESENTER: STACEY STARK

Zoom Logistics

If you haven't yet, please type your name and jurisdiction or department in the Chat window

PLEASE REMAIN MUTED AND VIDEO OFF SO EVERYONE CAN HAVE THE BEST EXPERIENCE.

USE CHAT:

- Send a message to everyone
- Send a message to individuals or the presenters
- Send a message to host to ask for help or ask a question that isn't for the whole group. The host is Stacey Stark



ASK TO SPEAK:



PRESENTER: STACEY STARK

Meeting Purpose & Agenda



July 1, 2018 Henderson area flooding

The purpose of this meeting is to formally convene the Sibley County MHMP Planning Team for a presentation on the draft plan and discussion of key items prior to public review and submission of the plan to HSEM and FEMA.

Hazard Mitigation Planning Meeting #2 Agenda

- Welcome & Introductions
- Recap of Key MHMP Points
- Review of Risk Assessment & Vulnerability Analysis
- Overview of FEMA HMA Funding and Mitigation Action Charts (MAC)
- MAC Review & Feedback
- Next Steps

PRESENTER: STACEY STARK

About your Project Team

U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

U-Spatial at the University of Minnesota Duluth was contracted by MN HSEM to facilitate the development of this plan and to conduct spatial analysis, mapping and research for the plan.

This Hazard Mitigation Plan is one of many we are working on this year.

Working with U-Spatial@UMD is **Bonnie Hundrieser**, who specializes in Emergency Management planning.

PRESENTER: STACEY STARK

Overview of Plan Update

Sibley County is updating its **Multi-Hazard Mitigation Plan (MHMP)** to fulfill a state & federal requirement. The plan must be updated every 5 years. The last plan was adopted in 2015.

The purpose of the plan is to identify & assess natural hazards that pose risk to the county and its jurisdictions and **develop long-term strategies and mitigation actions** that will help to reduce or eliminate the impact of future hazard or disaster events.



Hazard Mitigation is any action taken to reduce or eliminate long term risk to people and property from natural disasters.

PRESENTER: BONNIE HUNDRIESER

Who the Plan Covers

This is a **multi-jurisdictional plan** that covers Sibley County, including the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, New Auburn, and Winthrop.

The county and cities are required to adopt the final plan. Townships are covered under the umbrella of the county but may also elect to adopt the plan.



PRESENTER: BONNIE HUNDRISEK

Who Needs to Participate



Key Stakeholders

It is required to provide an opportunity for local county & municipal government, related agency stakeholders and neighboring jurisdictions to participate in the plan update.

- 2 Planning Team Meetings
- Local Mitigation Survey
- Provision of key data
- MAC Review & Feedback
- Review of Draft Plan

The Public

It is required to provide an opportunity for the public to learn about the plan update, ask questions and provide input that may be incorporated into the plan update.

- 2 News Releases
- Outreach conducted via websites, social media and local media
- Online public review & comment period for draft plan

PRESENTER: BONNIE HUNDRISEK

Prioritization of Hazards for Sibley County



Prioritization of hazards by the Sibley County planning team included consideration of:

- Probability and Severity of natural hazard events (risk)
- Observed increase or decrease in risk since 2015
- Jurisdictional variations in risk (i.e., local vulnerabilities, changes in development)

Hazard	2020 Priority
Tornado	High
Flood	High
Windstorms	Moderate to High
Hail	Moderate
Winter Storms	Moderate
Extreme Cold	Moderate
Extreme Heat	Moderate
Drought	Low to Moderate
Landslides	Low to Moderate
Lightning	Low
Land Subsidence	Low
Wildfire	Low
Dam Failure	Low

PRESENTER: BONNIE HUNDRISEK

Hazards Risk Assessment

- Validate prioritization
- Provide probability and severity of future events as possible
- Identify vulnerable populations and structures at risk as possible
- Consider variable jurisdictional vulnerability
- Inform Mitigation Actions in the HMP



June, 2014 CSAH 6 flood damage

PRESENTER: STACEY STARR

U-Spatial@UMD – County Coordination

U-Spatial@UMD Team has worked closely with personnel from the county to collect key information for the plan update.

- County Emergency Management Director
- County GIS Specialist
- County Assessor
- County Departments (i.e. Highway, Planning & Zoning, others).
- Others (SWCD, USFS)

PRESENTER: STACEY STARR

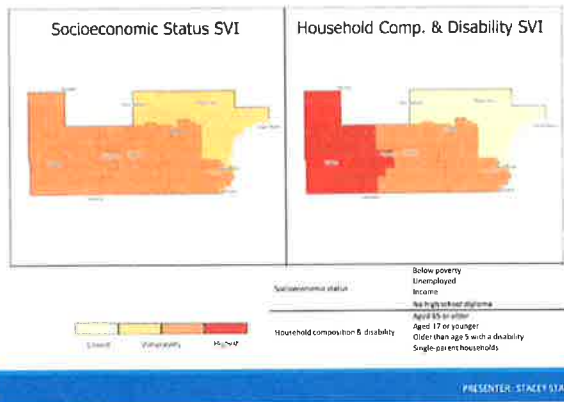
All Hazards – Critical Infrastructure

- Healthcare Facilities
- Emergency Services
- Schools and Shelters
- Transportation
- Utilities
- Dams and Levees
- Hazardous Materials Facilities
- Major Employers
- Government Buildings
- Cultural Resources

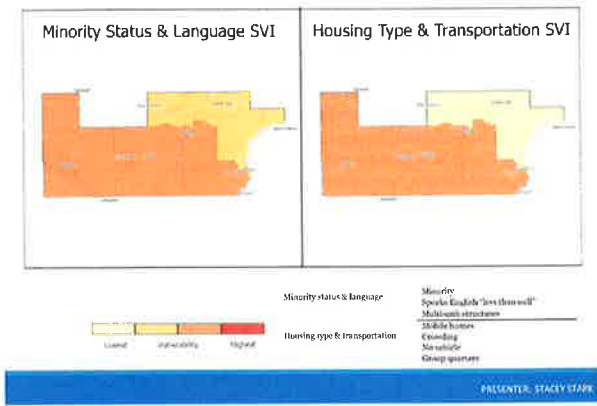


PRESENTER: STACEY STARR

All Hazards – Population Vulnerability

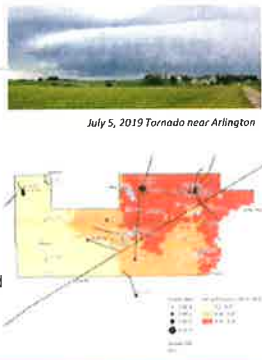


All Hazards – Population Vulnerability

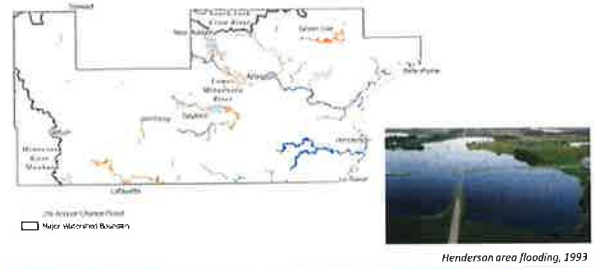


SIBLEY COUNTY: Tornadoes (high)

- Based NCEI Storm Events Database through August 2021, the relative frequency of tornadoes in Sibley County is .45 per year
- Recent tornadoes in 2017, 2019 (multiple).
- Tornado safe rooms and outdoor warning sirens are a high priority for Sibley County parks with campground facilities as well for numerous cities within the county.



SIBLEY COUNTY: Flooding (high)

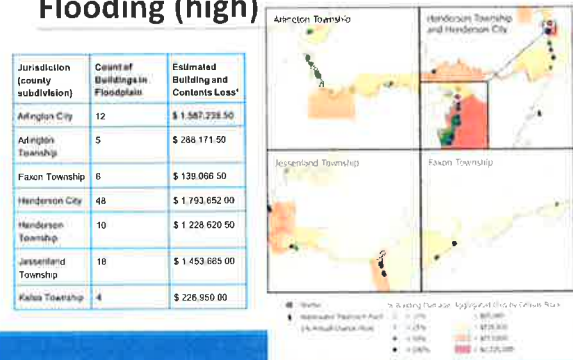


SIBLEY COUNTY: Flooding (high)

- Obtained building and parcel values from County
- Used statewide building footprint data
- Obtained FEMA Flood Insurance Rate Maps
- Ran flood model to estimate economic loss
- Identified Critical Infrastructure in flood zone



SIBLEY COUNTY: Flooding (high)



SIBLEY COUNTY: Windstorms & Hail (moderate to high)

- The relative frequency of all wind-related events since January of 1996 is **3.7** per year. Several 45-55 mph windstorms in 2019.
- There were four hailstorms with hail greater or equal to 1-inch since 2015. The relative frequency of all hail events is **1.5** per year.



July, 9, 2017 baseball-sized hail



July, 9, 2017 Winthrop hail storm damage

PRESENTER: STACEY STAKE

SIBLEY COUNTY: Winter Storms (moderate)

3.7 winter-related storm events per year in Sibley County



Associated Press

Vulnerability - Program Gaps & Deficiencies:

- Aboveground Powerlines
- Backup Power for critical facilities
- Public sign-up for emergency notifications



November 30, 2018 Winter Storm Warning issued for Sibley County

PRESENTER: STACEY STAKE

SIBLEY COUNTY: Extreme Cold (moderate)

The county experiences an average of **2-3 extreme cold days each year** (daily minimum temperature reached -18°F).

The frequency of cold-related **events** in Sibley County is **.8** per year. (-25°F and colder with wind chill)

Program Gaps and Deficiencies:

Obtaining generators for backup power to healthcare facilities and designated shelter facilities.

Plans and Programs In Place

- Emergency Notifications – NWS & Sibley County Emergency Management
- School Closings – policy and communication plans
- NWS Winter Hazard Awareness Week – public education & awareness

PRESENTER: STACEY STAKE

Development of Mitigation Actions

- Must address hazards of high to moderate risk
- Must be jurisdictionally-specific
- Should address local vulnerabilities & reduce risk
- Should incorporate existing planning mechanisms and capabilities



Important

Eligible FEMA HMA project activities must be identified to support a future grant application.

FEMA HMA Grant Funding



- All applicants must be covered by an approved MHMP
- Cost share: Federal 75%, Applicant 25%
- Projects must address risk reduction.
- Eligible projects must be identified in the plan of action.

Example Eligible Activities:

- Property Acquisition (flooding/erosion)
- Tornado Safe Rooms (new/retrofit)
- Infrastructure Retrofits (utility systems, roads & bridges)
- Wildfire Mitigation
- Soil Stabilization
- Flood Risk Reduction
- Green Infrastructure
- Other projects difficult to conduct a standard BCA

PRESENTER: BOHDE HUNDWESKA

Mitigation Action Charts Overview

- County MAC (includes townships)
- City MACs
- 5-year window
- Please consider any additional mitigation action you would like to add to your local MAC.

SIBLEY COUNTY		Allegation/Action	2018-2022	2023-2027	2028-2032	2033-2037	2038-2042	2043-2047	2048-2052	2053-2057	2058-2062	2063-2067	2068-2072	2073-2077	2078-2082	2083-2087	2088-2092	2093-2097	2098-2102
1	County	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	City	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Township	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

PRESENTER: BOHDE HUNDWESKA

Local Planning & Regulations



SIBLEY COUNTY EXAMPLES:

- Participating in the NFIP
- Update of comprehensive plans to better address mitigation for flooding.
- Collaborating with SWCD and watershed districts to address flooding and erosion.
- Working with MHP operators to be in compliance with Minnesota State statutes for storm shelters & evacuation plans.
- Providing grant writing assistance to jurisdictions for mitigation activities.



PRESENTER | BONNIE HUNDRIESEN

Structure & Infrastructure Projects

SIBLEY COUNTY EXAMPLES:

- Installation of new outdoor warning sirens.
- Construction of safe rooms / storm shelters at county parks with campgrounds, MHPs, and city parks.
- Burying powerlines to reduce power failure
- Implement stormwater improvement projects to reduce impacts of future high rain events (i.e. drainage, culvert upsizing, protection of critical infrastructure).
- Conducting property buyouts of homes at risk from repetitive flooding or erosion and convert to open space.



PRESENTER | BONNIE HUNDRIESEN

Natural Systems Protection

SIBLEY COUNTY EXAMPLES:

- Work with MnDOT and the Sibley County SWCD on the planting of living snow fences along high-drift road corridors.
- Identify and address areas of erosion / landslide potential in the county that pose risk to homes or adjacent roadways.
- Conduct vegetation management along roads to reduce downed limbs and trees from severe storms.



PRESENTER | BONNIE HUNDRIESEN

Education & Awareness Programs

SIBLEY COUNTY EXAMPLES:

- Promoting sign-up for the County's CodeRED emergency notification system.
- Promoting residents to be aware of and prepared for severe weather and extended power outages.
- Encouraging residents to maintain sump pumps and to clear street drains of debris.
- Participation in the NWS Severe Weather Awareness Weeks
- SKYWARN Storm Spotter Training



PRESENTER | BONNIE HUNDRIESEN

Mitigation Preparedness & Response Support

SIBLEY COUNTY EXAMPLES:

- Purchasing generators for critical services or facilities (i.e., sewer, city well, City Hall, fire hall, community centers).
- Updating EOP's
- Shelter Planning
- Working with long-term care facilities to be prepared for power outages or evacuation.
- Training local elected officials in EM responsibilities



PRESENTER | BONNIE HUNDRIESEN

Comments and Questions?



Fall 2021

Planning Team Meeting #2 and Public Review & Comment Period

- Following Planning Team Mtg. #2, disseminate & document news release by county and jurisdictions.
- Conduct public review & comment period (stakeholder & public review of draft plan).
- Document and incorporate feedback into the plan as appropriate.

PRESENTER: BONNIE HUNDRIESER



Fall-Winter 2021

Draft Plan Submission to HSEM & FEMA, Plan Approval, and Collection of Adopting Resolutions

- Draft plan will be submitted first to HSEM and then to FEMA for approval for meeting all Federal requirements.
- Typically requires 1-2 months.
- APA letter
- EM coordination of adopting resolutions

PRESENTER: BONNIE HUNDRIESER

Questions?

What questions do you have for U-Spatial@UMD about the draft MHMP or next steps ?

PRESENTER: STACEY STARK

Contact Information

Stacey Stark, MS, GISP
 U-Spatial@UMD
slstark@d.umn.edu
 218-726-7438

Bonnie Hundrieser, HM Planner
 Hundrieser Consulting LLC
hundrieserconsulting@outlook.com
 218-343-3468



PRESENTER: STACEY STARK

Mitigation Strategies & Action Types

Following are the five types of mitigation strategies that will be used in the update of the Multi-Hazard Mitigation Plan with examples of related mitigation actions. Minnesota HSEM recommends the use of these mitigation strategies to be in alignment with the State plan and those recommended by FEMA. The first four strategies listed are taken from the FEMA publications *Local Mitigation Planning Handbook* (2013) and *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (2013). The fifth strategy type was determined by Minnesota HSEM for use within the state.

These strategies will provide the framework for identification of new jurisdictional-level mitigation actions for implementation over the next 5-year planning cycle.

Mitigation Strategy	Description	Example Mitigation Actions
<p>Local Planning and Regulations</p>	<p>These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.</p>	<ul style="list-style-type: none"> • Comprehensive plans • Land use ordinances • Planning and zoning • Building codes and enforcement • Floodplain ordinances • NFIP Community Rating System • Capital improvement programs • Open space preservation • Shoreline codes • Stormwater management regulations and master plans • Mobile home park compliance for storm shelters
<p>Structure and Infrastructure Projects</p>	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p>	<ul style="list-style-type: none"> • Property Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits (i.e., metal roofs) • Floodwalls and retaining walls • Detention and retention structures • Culvert Installation/Modification • Roads & Bridge risk reduction • Safe Room (New construction or facility retrofit) • Green Infrastructure Methods <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>

Mitigation Strategy	Description	Example Mitigation Actions
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	<ul style="list-style-type: none"> • Soil stabilization for sediment and erosion control • Floodplain and Stream corridor restoration • Slope management • Forest management (defensible space, fuels reduction, sprinkler systems) • Conservation easements • Wetland restoration and preservation • Aquifer Storage & Recovery • Flood Diversion and Storage <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>
Education and Awareness Programs	These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions that support life safety and lessen property damage.	<ul style="list-style-type: none"> • Radio or television spots • Websites with maps and information • Social media outreach • Promotion of sign-up for emergency warnings • Real estate disclosure • Promotion of NFIP insurance to property owners • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas. • NWS StormReady Program • Firewise Communities <p><i>Some of these types of actions may be projects eligible for funding through the FEMA HMA "5 Percent Initiative Program".</i></p>
Mitigation Preparedness and Response Support	This is a State of Minnesota mitigation strategy with the intent of covering emergency preparedness actions that protect life and property prior to, during, and immediately after a disaster or hazard event. These activities are typically not considered mitigation, but support reduction of the effects of damaging events.	<ul style="list-style-type: none"> • Emergency Operations Plan • Flood fight plans and preparedness measures • Dam emergency action plans • Emergency Warning Systems (i.e., CodeRed, warning sirens) • Generator backup power • NWS Storm Spotter Training • Training and education for local elected officials and key partners.

Appendix G – Public Outreach & Engagement Documentation

Sibley County MHMP News Release #1 Record of Public Input & Incorporation

Overview: On June 2, 2020, Sibley County Emergency Management put out a news release titled “Public Input Wanted as County Updates Multi-Hazard Mitigation Plan” to announce the start of the county’s Multi-Hazard Mitigation Plan. The news release provided information on the purpose and content of the plan, who the plan covers, stakeholders involved in the plan update and examples of hazard mitigation activities. Sibley County used the news release to gather feedback from residents and businesses from across the County to incorporate into the plan, inviting feedback to the following:

- What are the natural hazards you feel pose the greatest risk to your community?
- Have you experienced a previous disaster event?
- What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole?

The public was strongly encouraged contact Sibley County Emergency Management to submit comments, concerns, or questions regarding natural disasters and potential mitigation actions to be included into the plan update process. The public was also able to post comments electronically on county or city Facebook sites where the news release was posted.

Distribution: The following news release was sent via email to the county’s MHMP Jurisdictional Contact List, which includes the names, titles, phone numbers, and email addresses of key stakeholders to be engaged in the MHMP update (**County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts**). The news release was additionally sent to local media contacts such as area newspapers, radio and television channels with a request to carry the news release.

Postings: The news release was shared via numerous channels to reach the public, including the Sibley County website, Sibley County Facebook, Sibley County Twitter, and local newspapers. Cities and townships were encouraged to help share the news release locally by posting it on their websites, social media, or community bulletin boards. (See following documentation of postings).

Public Input & Incorporation:

Following is a record of public responses to the news release and how their input will be incorporated into the plan update, and if not relevant to be addressed, why.

Comment: 1 public comment was received in response to the news release posted on the Sibley County Facebook page:

"In MN, wind, hail, tornados are common. Big threats that need to be addressed. As an insurance agent I'd love to see more involvement with the county. Education ahead of time about having the right protection is key. So many people don't have the right coverage to protect them from a natural disaster, or enough protection. Also, once a loss is occurred, maybe having the county

being educated on how claims work would be helpful because often times there seems to be a disconnect on how things actually work so if they are told something by a county worker and that's not the case the customer will be very upset. Also making sure clients up front and through the process know that a lot of it depends on the policy they purchased before the event occurred, but also every company handles things differently too. But I can absolutely see value in the county having a program like this because it's a neutral party."

Incorporation: The Sibley County 5-year mitigation action chart and local jurisdictional mitigation action charts will include a focus on public education and awareness programs for residents to be aware of severe storms and person preparedness, which may include local governments to encourage residents to explore personal insurance for disaster events.

Following is documentation of the means of public outreach for News Release #1.

From: [Andrew Hayden](#)
To: [Adam Stegeman](#); [Joseph Ludowese](#); [Amy Newsom](#); [City Arlington](#); [Kirby Weckworth](#); [Sara Burton](#); [James Kuphal](#); [Jasper Kruggel](#); [Justin Nielsen](#); [Deb Paige](#); [Ann Traxler](#); [Kevin Mathews](#); [Justin Block](#); [Scott Haas](#); [Aaron Goemann](#); [Jeremy Templin](#); [Jesse Lutterman](#); [John Glisczinski](#); [Klea Rettmann](#); [Marilee Peterson](#); [Patrick Nienaber](#); [Steve Saxton](#); [Tim Becker](#); [Tara McConnell](#); [Chief Charlie Fichten](#); [Lori Young](#); [Ty Reimers](#); [Lonnie Seifert](#); [Dana Lietzau](#); [Dean Schons](#); [Gary Burdorf](#); [City Isle](#); [Frank Grimm](#); [John Zaske](#); [Justin TenEyck](#); [City Auburn](#); [Tom Phillips](#); [Roger Trebbensee](#); [Troy Martin](#); [Brandi Barrett](#); [Tim Haggemiller](#); [Dan Eibs](#); [Mike Opitz](#); [Randy Tiegs](#); [Beverly Stueber](#); [Toby Bruns](#); [Lyle Wiest](#); [lonber3@mchsi.com](#); [Rvna Hentges](#); [Mike Hennen](#); [John Zaske](#); [Dale Schauer](#); [John Forst](#); [Jim Amsden](#); [Joel Wurscher](#); [Mark Marcy](#); [Doug Grindberg](#); [Scott Vos](#); [Jenny Palmer](#); [Karen Johnson](#); [Kenn Mueller](#); [Matthew Rabe](#)
Cc: [Bonnie K Hundrieser](#)
Subject: Sibley County Hazard Mitigation Update
Date: Tuesday, June 2, 2020 10:47:40 AM
Attachments: [News Release #1.pdf](#)

Greetings,

Sibley County Emergency Management is commencing work on the update of the Sibley County 5-year Multi-Hazard Mitigation Plan (MHMP). Attached is a news release for your information.

Over the next year we will be working with a planning team made up of representatives from the County and each city covered by the plan, as well as townships and other key stakeholders to gather feedback and document participation in the planning process. Key activities will include participation in 2 planning team meetings, providing requested information, and identifying local mitigation projects that will help to reduce or eliminate the impacts of future hazard events. Please watch for emails inviting your participation in the coming months.

Cities and townships are encouraged to help share this news release locally to strengthen our public outreach. Please notify me if you have posted the news release and provide documentation of the posting (i.e. email a link to your website or social media, or email a picture of the posting on a community bulletin board).

I look forward to your participation in the Sibley County MHMP update.

If you have any questions, please let me know.

Thank you,

Deputy Andrew Hayden
Sibley County Emergency Management Director

Sibley County Sheriff's Office
419 Harrison St
PO BOX 102
Gaylord MN, 55334

Desk 507-237-7817
Cell 507-227-2306



SIBLEY COUNTY NEWS RELEASE
June 2, 2020

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

Tornadoes, straight-line winds, ice storms, blizzards, flooding, wildland fires and droughts are the kinds of natural disasters most likely to cause widespread economic loss and personal hardship in Sibley County. Taking steps to minimize the damage from a natural disaster is key to the County's multi-hazard mitigation plan (MHMP); and as the County works to update the plan, it wants to hear from the public.

The Sibley County Office of Emergency Management is currently working with U-Spatial at the University of Minnesota Duluth to update the County's plan. Also working on the update is a planning team of representatives from County departments, local municipalities, school districts and other key stakeholders such as utility providers.

The Sibley County MHMP is a multi-jurisdictional plan that covers Sibley County, including the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn, and Winthrop. The plan additionally covers the portion of the city of Le Sueur that is located within Sibley County. The Sibley County MHMP also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan.

"Hazard mitigation planning is a central part of our emergency management program," said Andrew Hayden, Sibley County Emergency Management Director. "Understanding the natural hazards that can cause serious impact to our communities and taking action to reduce or eliminate the impact of future disasters makes us more resilient. Hazard mitigation helps us to break the cycle of damage and repair caused by things like flooding, ice storms, and severe wind events that can damage property, stress economies, and threaten life safety in our county."

Examples of hazard mitigation include actions include improvement of roads and culverts that experience repetitive flooding; construction of safe rooms at campgrounds, public parks, mobile home parks or schools to protect lives in the event of tornados or severe wind events; burying powerlines that may fail due to heavy snow, ice or wind storms; ensuring timely emergency communication to the public through warning sirens and mass notification systems, and conducting public awareness and education campaigns to help people to be prepared to take safe action before, during, or following a hazard event. Some mitigation activities may be eligible for future FEMA Hazard Mitigation Assistance grant funding.

As part of the planning process, Sibley County is seeking feedback from residents and businesses from across the County to incorporate into the plan:

- What are the natural hazards you feel pose the greatest risk to your community?
- Have you experienced a previous disaster event?

Protecting with pride and serving with dignity and respect.

EOE

- What concerns do you have, and what sorts of mitigation actions or projects do you feel would help to reduce the damages of potential future events for your personal property, your community, or the County as a whole? Comments, concerns, or questions regarding natural disasters and potential mitigation actions to be included into the plan update process should be submitted to Sibley County Emergency Management.

There will be additional opportunities for public feedback throughout the planning process. A draft of the plan will be posted on the County website for public review prior to submission of the plan to the State of Minnesota. Future news releases will be shared with the media to notify the public of these opportunities.

The Federal Disaster Mitigation Act of 2000 (DMA 2000) requires counties to update their plan every 5 years to maintain eligibility for FEMA's Hazard Mitigation Assistance (HMA) grant programs.

Contact

Andrew Hayden

Sibley County Emergency Management Director

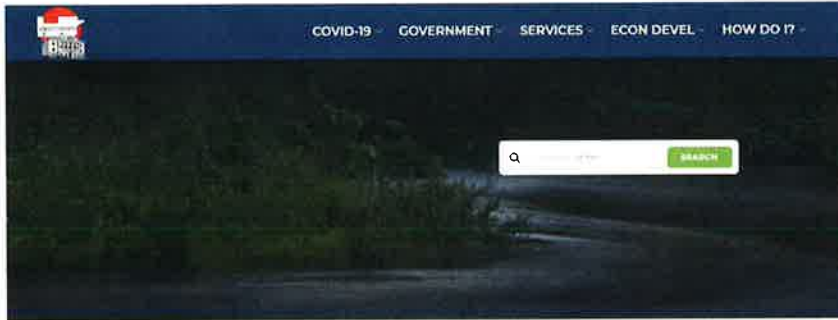
Phone: 507-237-7817

Email: andrewh@co.sibley.mn.us

Sibley County MHMP News Release #1 Documentation of News Release Postings

COUNTY POSTINGS

Sibley County County Website, June 2, 2020



Home » News » Sibley County is Seeking Feedback From Residents And Businesses To Incorporate Into The Multi-Hazard Mitigation Plan

Sibley County is seeking feedback from residents and businesses to incorporate into the Multi-Hazard Mitigation Plan

Currently the County is taking necessary steps to update the Mitigation Plan and looking for any public information on updating the plan. If you are interested in participating please click [here](#).

Sibley County Facebook Posting, June 10, 2020



Sibley County

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- Community
- Videos
- Events
- About

Like Share Suggest Edits



Sibley County is seeking feedback from residents and businesses to incorporate into the Multi-Hazard Mitigation Plan. Your input is greatly appreciated!



NEWS RELEASE

Sibley County is seeking feedback from residents and businesses to incorporate into the Multi-Hazard Mitigation Plan.

As a result of the COVID-19 pandemic, Sibley County is seeking feedback from residents and businesses to incorporate into the Multi-Hazard Mitigation Plan. Your input is greatly appreciated!

The Multi-Hazard Mitigation Plan (MHMP) is a critical part of the emergency management process. It is a document that outlines the actions that should be taken in the event of a disaster. The MHMP is a living document that is updated as new information is received. The MHMP is a key component of the emergency management process and is used to guide the response to a disaster.

The MHMP is a critical part of the emergency management process. It is a document that outlines the actions that should be taken in the event of a disaster. The MHMP is a living document that is updated as new information is received. The MHMP is a key component of the emergency management process and is used to guide the response to a disaster.

Sibley County Twitter Posting, June 10, 2020



Sibley County @CountySibley · Jun 10



SIBLEY COUNTY NEWS RELEASE

Date: 6/10/20

Media Inquiries: Sue Clark, Director

Media: 507-335-3344

Media: 507-335-3344

Media: 507-335-3344

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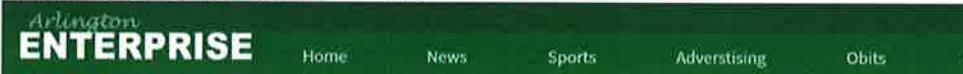
Media: 507-335-3344

Media: 507-335-3344

...to the maximum extent feasible, and other acts of preparation to ensure persons in the area feel confident help to reduce the damage of potential hazards from the most potential hazards...
...These will be addressed separately for public feedback throughout the planning process...
...The Sibley County Office of Emergency Management is currently working with Spatial at the University of Minnesota, Duluth, to update the county's plan...
...Find the complete story in the June 18, 2020 addition of the Arlington Enterprise...

LOCAL MEDIA POSTINGS

Arlington Enterprise online, June 18, 2020



Public input wanted as Sibley County updates multi-hazard mitigation plan

2020-06-18

Tornadoes, straight-line winds, ice storms, blizzards, flooding, wildland fires and droughts are the kinds of natural disasters most likely to cause widespread economic loss and personal hardship in Sibley County. Taking steps to minimize the damage from a natural disaster is key to the county's multi-hazard mitigation plan (MHMP), and as the county works to update the plan, it wants to hear from the public.

The Sibley County Office of Emergency Management is currently working with Spatial at the University of Minnesota, Duluth, to update the county's plan. Also working on the update is a planning team of representatives from county departments, local municipalities, school districts and other key stakeholders such as utility providers.

Find the complete story in the June 18, 2020 addition of the Arlington Enterprise.

Public input wanted as Sibley County updates multi-hazard mitigation plan

Thursday, through the end of next month, Sibley County is seeking public input on the county's multi-hazard mitigation plan (MHMP). The county is currently working with the State of Minnesota to update the county's MHMP. The county is currently working with the State of Minnesota to update the county's MHMP. The county is currently working with the State of Minnesota to update the county's MHMP.

Emergency Management Director Andrew Hays says, "We want to make sure that our citizens are protected from the impact of our natural disasters and taking action to reduce or eliminate the impact of future disasters makes us more resilient. Hazard mitigation helps us to reduce the risk of damage and restore caused by things like flooding, earthquakes, and severe wind events that can damage property, impact economies, and threaten life safety in our county."

Examples of hazard mitigation include: construction of levees and dikes to protect low-lying areas; construction of fire stations at strategic locations; public parks, mobile home parks, or schools to protect lives in the event of tornadoes or severe wind events; buying properties that may fall due to heavy snow, ice or wind storms; ensuring timely emergency communication to the public through warning systems and mass notification systems; and conducting public awareness and education campaigns to help people to be prepared to take safe action before, during, or following a hazard event.

Some mitigation activities may be eligible for future FEMA Hazard Mitigation Assistance grant funding. As part of the planning process, Sibley County is seeking feedback from residents and businesses from across Sibley County to help inform the plan.

The Sibley County Office of Emergency Management is currently working with Spatial at the University of Minnesota, Duluth, to update the county's plan. Also working on the update is a planning team of representatives from county departments, local municipalities, a food co-op, and other key stakeholders such as utility providers.

The Sibley County MHMP is a multi-jurisdictional plan that covers Sibley County including the cities of Arlington, Gaylord, Gibson, Green Isle, Hendrickson, New Auburn and Wrotham. The Sibley County MHMP also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan.

"Hazard mitigation planning is a critical part of our emergency management program," said Sibley County

Emergency Management Director Andrew Hays. "We want to make sure that our citizens are protected from the impact of our natural disasters and taking action to reduce or eliminate the impact of future disasters makes us more resilient. Hazard mitigation helps us to reduce the risk of damage and restore caused by things like flooding, earthquakes, and severe wind events that can damage property, impact economies, and threaten life safety in our county."

Examples of hazard mitigation include: construction of levees and dikes to protect low-lying areas; construction of fire stations at strategic locations; public parks, mobile home parks, or schools to protect lives in the event of tornadoes or severe wind events; buying properties that may fall due to heavy snow, ice or wind storms; ensuring timely emergency communication to the public through warning systems and mass notification systems; and conducting public awareness and education campaigns to help people to be prepared to take safe action before, during, or following a hazard event.

Some mitigation activities may be eligible for future FEMA Hazard Mitigation Assistance grant funding. As part of the planning process, Sibley County is

seeking feedback from residents and businesses from across Sibley County to help inform the plan.

There will be additional opportunities for public feedback throughout the planning process. A draft of the plan will be posted on the county website for public review prior to submission of the plan to the State of Minnesota. Future news releases will be shared with the media to notify the public of these opportunities.

The Federal Disaster Mitigation Act of 2000 (DMA 2000) requires counties to update their plan every five years to maintain eligibility for FEMA's Hazard Mitigation Assistance (HMA) grant programs.

THE GAYLORD HUB



Sixteen precincts have now switched to mail ballot election

City Council seeking periodic updates from building inspector

County wants your input

On its multi-hazard mitigation plan -

Sibley County is currently working with the State of Minnesota to update the county's MHMP. The county is currently working with the State of Minnesota to update the county's MHMP. The county is currently working with the State of Minnesota to update the county's MHMP.

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City Council seeking periodic updates from building inspector

The City Council is seeking periodic updates from the building inspector regarding the status of various projects and the progress of the building department.

CITY POSTINGS

City of Arlington
City Website, July 23, 2020



Home About City Officials News Events Community City Departments



Sibley County News Release

July 23, 2020 by [Jesse Bernhardt](#)



SIBLEY COUNTY NEWS RELEASE June 2, 2020 Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

Tornadoes, straight-forward winds, ice storms, blizzards, flooding, wildfires and droughts are the kinds of natural disasters most likely to cause widespread economic loss and personal hardship in Sibley County. Taking steps to minimize the damage from a natural disaster is key to the County's multi-hazard mitigation plan (MHMP), and as the County works to update the plan, it wants to hear from the public.

[CLICK HERE FOR FULL DETAILS](#)

Arlington News
Sibley County
New Release

[SIBLEY COUNTY NEWS RELEASE \(June 2, 2020\) Public Input Wanted as County Updates](#)

Gov. Walz
Announces
Statewide Mask
Mandate

[Read More](#)

Upcoming Events
Private Event

City of Arlington
City Facebook Page, July 23, 2020

SIBLEY COUNTY NEWS RELEASE
June 2, 2020

Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

Tornadoes, straight-forward winds, ice storms, blizzards, flooding, wildfires and droughts are the kinds of natural disasters most likely to cause widespread economic loss and personal hardship in Sibley County. Taking steps to minimize the damage from a natural disaster is key to the County's multi-hazard mitigation plan (MHMP), and as the County works to update the plan, it wants to hear from the public.

The Sibley County Office of Emergency Management is currently working with USpatial at the University of Minnesota (Duluth) to update the County's plan. Also working on the update is a planning team of representatives from County departments, local municipalities, school districts and other key stakeholders such as utility providers.

The Sibley County MHMP is a multi-hazardous plan that covers Sibley County, including the cities of Arlington, Clifford, Colton, Green Lake, Hamleton, New Auburn and Winfrey. The plan additionally covers the portion of the city of Le Sueur that is located within Sibley County. The Sibley County MHMP also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan.

"Hazard mitigation planning is a central part of our emergency management program," said Ashley Hazdon, Sibley County Emergency Management Director. "Understanding the natural hazards that can cause serious impact to our communities and taking action to reduce or eliminate the impact of future disasters makes us more resilient. Hazard mitigation helps us to break the cycle of damage and repair caused by things like flooding, ice storms, and severe wind events that can damage property, stress economies, and threaten life safety in our county."

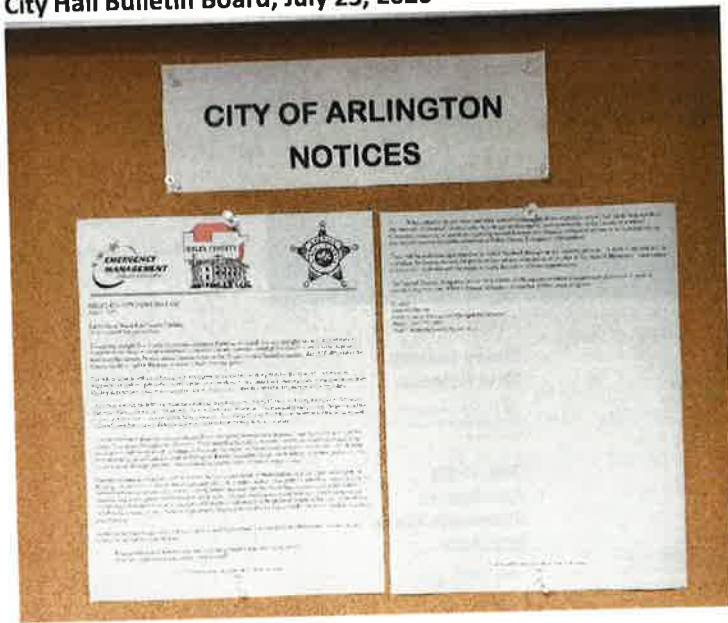
Examples of hazard mitigation include actions include improvement of roads and culverts that experience repetitive flooding, construction of safe rooms at campgrounds, public parks, mobile home parks or schools to protect lives in the event of tornadoes or severe wind events, buying generators that may fail due to heavy snow, ice or wind storms, ensuring timely emergency communication to the public through warning sirens and mass notification systems, and conducting public awareness and education campaigns to help people to be prepared to take safe action before, during, or following a hazard event. Some mitigation activities may be eligible for future FEMA Hazard Mitigation Assistance grant funding.

As part of the planning process, Sibley County is seeking feedback from residents and businesses from across the County to incorporate into the plan.

- What are the natural hazards you feel pose the greatest risk to your community?
- Have you experienced a previous disaster event?

Providing input will not result in any specific response.

**City of Arlington
City Hall Bulletin Board, July 23, 2020**



**City of Gaylord
Police Department Facebook Page, July 23, 2020**



City of Gibbon
City Facebook Page, June 2, 2020



Like Share

City of Gibbon
 Yesterday at 8:59 AM

Sibley County Emergency Management is commencing work on the update of the Sibley County 5-year Multi-Hazard Mitigation Plan (MHMP). Please see the attached news release.

City of Gibbon
 @cityofgibbon

- Home
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- Reviews
- Posts
- Community

Create a Page



NEWS RELEASE

City of Gibbon

we invite you to participate in the public input process for the update of the Sibley County 5-year Multi-Hazard Mitigation Plan (MHMP). The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

Office of Emergency Management is currently working with the County Board to update the County's plan. Also working on the update is a planning team of local emergency managers, public officials, and other key stakeholders who will update the plan. The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

Public input is a critical part of the emergency management process. The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters. The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

Public input is a critical part of the emergency management process. The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

Public input is a critical part of the emergency management process. The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

what sorts of mitigation actions or projects you would like to see for your personal property, your community, and potential mitigation actions for Sibley County Emergency Management.

or public feedback throughout the planning process. Review the plan prior to submission of the plan to the County Board to notify the public of these opportunities.

2000 (DMA 2000) requires counties to submit a Mitigation Assistance (HMA) grant project.

Director

City of Green Isle
City Website, June 17, 2020



City of Green Isle, MN

SIBLEY COUNTY – Public Input Wanted as County Updates Multi-Hazard Mitigation Plan

NEWS RELEASE

City of Gibbon

we invite you to participate in the public input process for the update of the Sibley County 5-year Multi-Hazard Mitigation Plan (MHMP). The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

Office of Emergency Management is currently working with the County Board to update the County's plan. Also working on the update is a planning team of local emergency managers, public officials, and other key stakeholders who will update the plan. The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

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Public input is a critical part of the emergency management process. The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

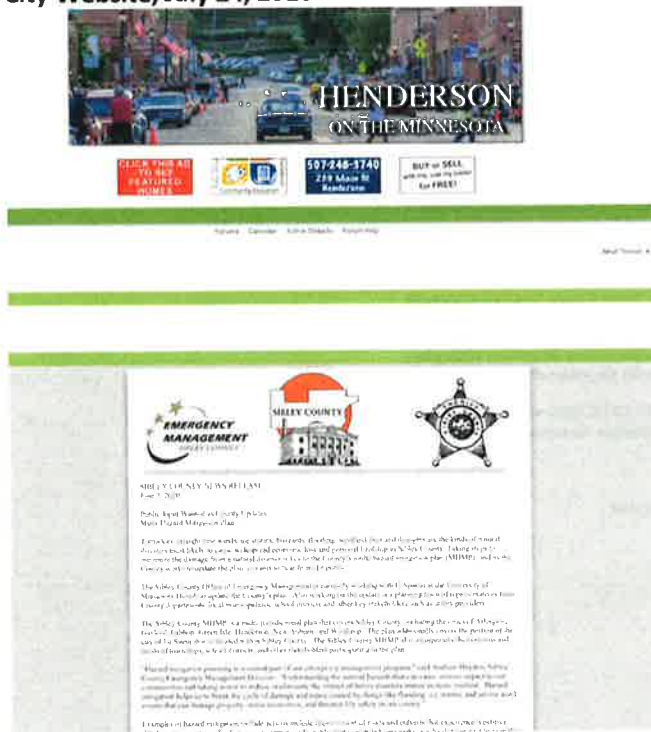
Public Input

Public input is a critical part of the emergency management process. The plan is a critical document that guides the County's efforts to reduce the risk of damage and injury caused by hazards like flooding, wind, and other natural disasters.

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**City of Henderson
City Website, July 24, 2020**



**City of Henderson
City Facebook Page, July 24, 2020**



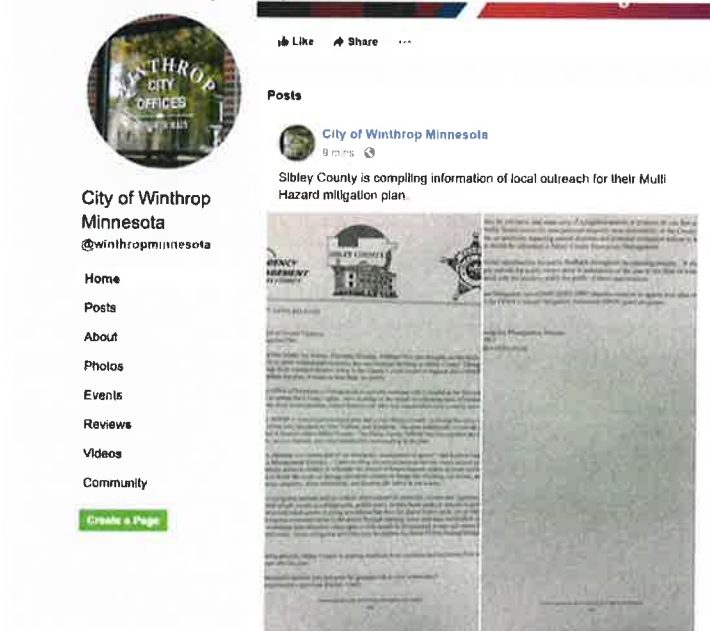
**City of Le Sueur
City Facebook Page, July 28, 2020**



**City of New Auburn
City Website, July 23, 2020**



**City of Winthrop
City Facebook Page, July 23, 2020**



City of Winthrop
City Hall Bulletin Board, July 23, 2020

WINTHROP CITY HALL

STARTED - 1981 COMPLETED - 1982

MAYOR LOVELL H. BURCHERT 1970-1981

CLERK - TREASURER SAMUEL W. SHULT


COUNCIL MEMBERS

WILFRED HANSEN	1987-1988
ARTHUR MARTIN	1970-1985
LOUIS NEVUS	1989-1997
GAROLD WEEB	1982-1986
VINSON ZABEL	1980-1981
DELBERT E. BURKLAND	1978-1980
GARLAND WALCZYK	1979-1981

LEGAL ADVISOR WOODBURY LAW OFFICE OF CHASEL

ARCHITECTS-ENGINEERS
 R. LIND CARROLL WOLLER ASSOCIATES, INC.

CONTRACTORS
 SIMSKEE AND SON CONSTRUCTION CO.
 THE S. FLOWERS AND SEATON
 W.B. ELECTRIC SERVICE, INC.



CHAMBER OF COMMERCE
 1000 W. 10th St.
 Winthrop, ME 04091
 Phone: (207) 838-1234

CITY OF WINTHROP
 1000 W. 10th St.
 Winthrop, ME 04091
 Phone: (207) 838-1234

WINTHROP POLICE DEPARTMENT
 1000 W. 10th St.
 Winthrop, ME 04091
 Phone: (207) 838-1234

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 Phone: (207) 838-1234

Sibley County MHMP News Release #2 Record of Public Input & Incorporation

Overview: On December 13, 2021 Sibley County Emergency Management put out a news release titled “**Public Comment Sought for County’s Multi-Hazard Mitigation Plan**” to announce the completion of the draft Sibley County Multi-Hazard Mitigation Plan and invitation for public review and comment. The news release informed jurisdictional stakeholders and the public that a copy of the draft plan and a form for public feedback was available online with a website link. The public review period for the draft plan was open from December 13 to December 26, for a total of 14 days.

Distribution: The news release was sent via email to the county’s MHMP Jurisdictional Contact List, which includes the names, titles, phone numbers, and email addresses of key stakeholders to be engaged in the MHMP update, including County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts. (A copy of the Jurisdictional Contact List can be found in Appendix F). The news release was additionally sent to local media contacts such as area newspapers, radio and television channels with a request to carry the news release.

Postings: Attached is documentation of the news release postings by Sibley County, participating jurisdictions, and local media. Cities and townships were encouraged to help share the news release locally by posting it on their websites, social media, or community bulletin boards.

Public Input & Incorporation:

Following is a record of public responses to the Sibley County news release and how the input will be incorporated into the plan update, and if not relevant to be addressed, why.

12/20/21 Plan Review Comment

Tim Becker, Sibley County Public Works Director
Feedback submitted via Email to Bonnie Hundrieser

Comment: I think we should add a section under Flooding, 5.1.5. & 6.3 Program Gaps and Deficiencies & Mitigation Action and Project Strategies. The existing drainage systems in Sibley County were designed in the early 1900's and are inadequate to meet today's changing climate. The drainage systems are too small and are experiencing large amounts of damage during large flood events. Improvements such as storage, and expansion of the drainage system are needed to meet the large rainfall events associated with climate change.

Incorporation: The noted gap was included under Section 5.1.5 (Flooding - Program Gaps & Deficiencies). The Sibley County Mitigation Action Chart – item #27 was also updated with approval of Tim Becker to reflect mitigation efforts by the county on this issue.

There were no additional review comments received from the public or planning team members.

From: [Bonnie K Hundrieser](mailto:hundrieserconsulting@outlook.com) on behalf of hundrieserconsulting@outlook.com
To: ["Andrew Hayden"](#); ["Joseph Ludowese"](#); ["Amy Newsom"](#); ["City Arlington"](#); ["Kirby Weckworth"](#); ["James Kuphal"](#); ["Jasper Kruggel"](#); ["Justin Nielsen"](#); ["Deb Paige"](#); ["Ann Traxler"](#); ["Kevin Mathews"](#); ["Justin Block"](#); ["Scott Haas"](#); ["Bobbie Harder"](#); ["Jeremy Templin"](#); ["Jesse Luterman"](#); ["John Glisczinski"](#); ["Klea Rettmann"](#); ["Marilee Peterson"](#); ["Patrick Nienaber"](#); ["Steve Saxton"](#); ["Tim Becker"](#); ["Tara McConnell"](#); ["Chief Charlie Eichten"](#); ["Steve Helget"](#); ["Sara Burton"](#); ["Ty Reimers"](#); ["Sven Mattson"](#); ["Lonnie Seifert"](#); ["Adam Stegeman"](#); ["William Donnav"](#); ["Dana Lietzau"](#); ["David Kahle"](#); ["Delayne Pagel"](#); ["Dean Schons"](#); ["Gary Burdorf"](#); ["City Isle"](#); ["Frank Grimm"](#); ["Steve Herschman"](#); ["John Zaske"](#); ["Justin TenEyck"](#); ["City Auburn"](#); ["Tom Phillips"](#); ["Roger Trebbensee"](#); ["Troy Martin"](#); ["Kevin Wenniger"](#); ["Brandi Barrett"](#); ["Tim Haggemiller"](#); ["Dan Eibs"](#); ["Randy Tiegs"](#); ["Lyle Forst"](#); ["Beverly Stueber"](#); ["Toby Bruns"](#); ["Wayne Grams"](#); ["Marlene Johnson"](#); ["Lyle Wiest"](#); ["Lon Berberich"](#); ["Ryna Hentges"](#); ["Mike Hennen"](#); ["Dale Schauer"](#); ["John Forst"](#); ["Jim Amsden"](#); ["Joel Wurscher"](#); ["Mark Marcy"](#); ["Doug Grindberg"](#); ["Scott Vos"](#); ["Jenny Palmer"](#); ["cityclerk@winthropminnesota.com"](mailto:cityclerk@winthropminnesota.com); ["Karen Johnson"](#); ["Kenn Mueller"](#); ["Adam Leske"](#); ["Matthew Rabe"](#)
Cc: ["Jeremy Templin"](#)
Subject: Sibley County News Release – Multi-Hazard Mitigation Plan Update Public Review
Date: Monday, December 13, 2021 9:32:00 AM
Attachments: [12-13-21 Sibley County MHMP Public Review News Release.docx](#)
[12-13-21 Sibley County MHMP Public Review News Release.pdf](#)
[image003.png](#)
Importance: High

Greetings,

The draft Sibley County Multi-Hazard Mitigation Plan is ready for public review and comment from **December 13 – December 26**. Please see the attached news release.

You are receiving this email because you are included on the Sibley County Multi-Hazard Mitigation Plan jurisdictional contact list. All recipients of this email are encouraged to review the plan and provide any comments. The link for the plan review website is https://z.umn.edu/sibley_hmp.

Sibley County Emergency Management requests that the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, New Auburn, and Winthrop post the news release to document local outreach which will be reviewed by FEMA. You can post the news release to your city website or Facebook page and provide a link to me and/or post the news release in a visible public location (i.e., community bulletin board, City Hall window, Post Office) and email me a photograph noting the location of the posting. Townships and other agency stakeholders (such as Sibley SWCD and school districts) are also encouraged to post the news release with the public.

There is only a 14 day open review period, so your timeliness to post is very important. Please return your posting documentation to me directly.

If you have any questions or comments, please let me know.

Thank you,
Bonnie Hundrieser

Bonnie K. Hundrieser, CEM
Hazard Mitigation Planning Specialist
Part of the **U-Spatial@UMD** MHMP Planning Team

 **HUNDRIESER CONSULTING LLC**
Emergency Management and Whole Community Planning

Cell: 218-343-3468

Email: hundrieserconsulting@outlook.com

Web: www.hundrieserconsultingllc.com



SIBLEY COUNTY NEWS RELEASE
December 13, 2021

Public Comment Sought for County's Multi-Hazard Mitigation Plan

Sibley County has completed an updated draft of the of its Multi-Hazard Mitigation Plan (MHMP) and is now seeking public feedback on it. Citizens can find a link to review the plan and offer feedback by visiting https://z.umn.edu/sibley_hmp. The review and comment period is open through Sunday, December 26, 2021. After that, the county will submit the draft plan to the State of Minnesota and the Federal Emergency Management Agency (FEMA) for review.

The Sibley County MHMP is a multi-jurisdictional plan that covers Sibley County, including the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, Le Sueur, New Auburn, and Winthrop. The Sibley County MHMP also incorporates the concerns and needs of townships, school districts, and other stakeholders participating in the plan.

Sibley County is vulnerable to a variety of potential natural disasters, which threaten the loss of life and property in the county. The plan addresses how to mitigate against hazards such as tornadoes, flooding, wildland fires, blizzards, straight-line winds, ice storms, and droughts which have the potential for inflicting vast economic loss and personal hardship.

Update of the plan has been under direction of Sibley County Emergency Management in cooperation with U-Spatial at the University of Minnesota Duluth and representatives from County departments, city and township governments, school districts, and other key stakeholders. Together, the planning team worked to identify cost-effective and sustainable actions to reduce or eliminate the long-term risk to human life or property from natural hazards. Some examples include improvement of roads and culverts that experience repetitive flooding; construction of safe rooms at campgrounds, public parks, mobile home parks or schools to protect lives in the event of tornados or severe wind events; burying powerlines that may fail due to heavy snow, ice or wind storms; ensuring timely emergency communication to the public through warning sirens and mass notification systems, and conducting public awareness and education campaigns to help people be prepared to take safe action before, during, or following a hazard event.

Hazard mitigation planning helps Sibley County and other jurisdictions protect their residents. Working with local communities through the process helps identify vulnerabilities and develop strategies to reduce or eliminate the effects of a potential hazard. In addition, increasing public awareness of local hazards and disaster preparedness helps to create a community that is resilient to disaster, and breaks the cycle of response and recovery. Updating the plan further allows the



County and its jurisdictions to apply for eligible projects under future Hazard Mitigation Assistance (HMA) grant funding from FEMA for projects that are cost-effective and will help to reduce or eliminate impacts of future natural disaster events.

Community feedback is vital to the success of the plan. Sibley County invites public review and feedback of the draft plan prior to submitting it to the State of Minnesota and the Federal Emergency Management Agency (FEMA) for review. Feedback may be provided via the online comment form or directly to Sibley County Emergency Management.

Contact:

Jeremy Templin

Chief Deputy / Deputy Emergency Management Director

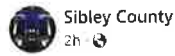
Phone: 507-237-4330

Email: jeremy@co.sibley.mn.us

Sibley County MHMP News Release #2 Documentation of News Release Postings

COUNTY POSTINGS

Sibley County Facebook 12/13/21



Sibley County has completed an updated draft of the of its Multi-Hazard Mitigation Plan (MHMP) and is now seeking public feedback on it. Citizens can find a link to review the plan and offer feedback by visiting https://z.umn.edu/sibley_hmp. The review and comment period is open through Sunday, December 26, 2021. After that, the county will submit the draft plan to the State of Minnesota and the Federal Emergency Management Agency (FEMA) for review.



2 Shares

- Like
- Comment
- Share

Sibley County Sheriff's Office Facebook, 12/13/21



Sibley County Sheriff's Office

- Home
- About
- Photos
- Reviews
- Posts
- Community
- Fundraisers
- Create a Page

- Like
- Share

Posts

Sibley County Sheriff's Office
54 mins



Sibley County
1 hr

Sibley County has completed an updated draft of the of its Multi-Hazard Mitigation Plan (MHMP) and is now seeking public feedback on it. Citizens can find a link to review the plan and offer feedback by visiting https://z.umn.edu/sibley_hmp. The review and comment period is open through Sunday, December 26, 2021. After that, the county will submit the draft plan to the State of Minnesota and the Federal Emergency Management Agency (FEMA) for review.

News & Announcements



DEC 14, 2021

Multi-Hazard Mitigation Plan (MHMP)

LOCAL MEDIA POSTINGS

Arlington News online, 12/16/21

An article was carried online but a screenshot of the article was not captured.

https://www.arlingtonmnnews.com/articles_display

✓ Sibley County seeks public comment for its Multi-Hazard ...

Dec 16, 2021 — Sibley County has completed an updated draft of its Multi-Hazard Mitigation Plan (MHMP) and is now seeking public feedback on it

CITY POSTINGS

City of Arlington, 12/15/21

City Hall Bulletin Board



City of Arlington, 12/15/21 City Facebook Page

The screenshot shows the Facebook profile for the City of Arlington, Minnesota. The profile includes contact information such as a phone number (+1 507-944-2478) and an email address (cityhall@arlingtonmn.com). A post from the city is visible, dated December 13 at 9:40 AM. The post text reads: "A draft of the Sibley County Multi-Hazard Mitigation Plan is ready for review and public comment." Below the text, the URL "ARLINGTONMN.COM" and the title "Sibley County Multi-Hazard Mitigation Plan - City of Arlington" are displayed.

City of Arlington, 12/15/21 City Website

The screenshot shows the homepage of the City of Arlington website. At the top is the city logo, "The City of ARLINGTON". Below the logo is a navigation menu with links for Home, About, City Officials, Events, Community, and City Departments. A search icon is located on the right side of the menu. The main content area features a large banner for the "Sibley County Multi-Hazard Mitigation Plan" with a background image of trees. Below the banner, there is a news article snippet dated December 13, 2021, by Amy Brinkman. The article text states: "The draft Sibley County Multi-Hazard Mitigation Plan is ready for public review and comment from December 13 - December 26." To the right of the article is a sidebar titled "Arlington News" with a sub-heading "Sibley County Multi-Hazard Mitigation Plan" and a brief description: "The draft Sibley County Multi-Hazard Mitigation Plan is ready for public review and comment from December 13 - December 26."

City of Gaylord, 12/13/21 Police Dept. Facebook Posting

The screenshot shows the Facebook profile for the Gaylord MN Police Department. The profile includes a "Build Your Page Audience" button and an "Intro" section with details such as "19K Followers", "Page · Law Enforcement Agency", and the address "200 Jefferson Ave E, Gaylord, MN, United States, Minnesota". A post from the department is visible, dated December 13 at 12:52 PM. The post text reads: "The draft Sibley County Multi-Hazard Mitigation Plan is ready for public review and comment from December 13 - December 26." Below the text, the URL "ARLINGTONMN.COM" and the title "Sibley County Multi-Hazard Mitigation Plan - City of Arlington" are displayed. The post also includes a "Boost post" button.

City of Gibbon, 12/20/21

City Facebook posting

AT&T 8:35 AM 86%

City of Gibbon

Posts About Photos Mentions

City of Gibbon's posts

City of Gibbon
Just now



GIBBON COUNTY OPEN HOUSE
December 21, 2021

Public Comment Sought for County's Multi-Hazard Mitigation Plan

The County has completed an update to all of the Multi-Hazard Mitigation Plans (MHMP) and is now seeking public feedback and comments. The update includes the plan and other feedback by using <https://www.surveymonkey.com/s/gibbon-county-mhmp>. The survey will remain open until 11:59 PM on December 23, 2021. After that time, the survey will close and the County will begin the process of reviewing the survey results.

The Gibbon County MHMP is a multi-hazard mitigation plan that covers all hazards, including the risks of flooding, fire, drought, severe weather, and other natural hazards. The plan is designed to help the County prepare for and respond to these hazards and to reduce the damage and loss of life and property that can result from these hazards. The plan also includes information on how to prepare for and respond to these hazards, including information on how to create an emergency plan, how to evacuate, how to prepare for and respond to these hazards, and how to create an emergency plan.

The County is seeking public feedback on the plan. The plan is designed to help the County prepare for and respond to these hazards and to reduce the damage and loss of life and property that can result from these hazards. The plan also includes information on how to prepare for and respond to these hazards, including information on how to create an emergency plan, how to evacuate, how to prepare for and respond to these hazards, and how to create an emergency plan.


Comments:
Name: _____
Email: _____

Home Feed Watch Groups Pages Notifications Menu

City of Green Isle

City of Henderson, 12/13/21

City Website





507-248-3740
219 Main St
Henderson, MN

BUY or SELL
with us, use my dealer
for FREE!

Welcome to the official site of Henderson, MN

Where is Henderson? Click here for a map.



Public Comment Sought for County's Multi-Hazard Mitigation Plan

FLOOD MITIGATION INFO

City of Le Sueur

City of New Auburn, 12/15/21
City Office Bulletin Board



City of New Auburn, 12/15/21
Post Office Bulletin Board



City of Winthrop, 12/16/21

City Website



Public Comment Sought for County's Multi-Hazard Mitigation Plan

City Seeks New Police Chief

RFP Packet Administrator Search Firm

Full Time Patrol Officer Application

Senior Living in Minnesota

Sibley County MHMP 2021

Online Public Review Website & Comment Form

Public Review Website

The Sibley County 2021 MHMP Update was made available for public review online with a website hosted by U-Spatial@UMD. The website provided a full draft of the 2021 MHMP update and individual excerpts of the Mitigation Action Charts for the county and each city jurisdiction. An online comment form was also provided for the submission of public comments or questions.



Sibley County is currently in the process of updating its Multi-Hazard Mitigation Plan. Before the plan is submitted to the State of Minnesota and FEMA for approval, we need your feedback!

Please review the draft plan, in particular the mitigation actions for your jurisdiction. Click the red bar below to submit feedback about the Hazard Mitigation Plan and MACs:



Select a link below to view the document online, or right click and select "save link as" to download the pdf.

[Sibley County MHMP 2021 draft plan](#)

[Sibley County Mitigation Action Chart \(MAC\)](#)

[Arlington Mitigation Action Chart](#)

[Gaylord Mitigation Action Chart](#)

[Gibbon Mitigation Action Chart](#)

[Green Island Mitigation Action Chart](#)

[Henderson Mitigation Action Chart](#)

[Le Sueur Mitigation Action Chart](#)

[New Auburn Mitigation Action Chart](#)

[Wintona Mitigation Action Chart](#)

For more information, please contact Stacey Stark at sstark@cd.umn.edu or visit <http://www.sibleycountymn.gov/mhmp2021/submit-feedback> or <http://www.sibleycountymn.gov/mhmp2021/mitigation-planning>

U-SPATIAL
UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Sibley MHMP Feedback & Comments Form

The online comment form provided an opportunity for reviewers to submit feedback on the plan. Feedback submitted was collected by U-Spatial@UMD and reviewed for incorporation into the plan. The form included the following:

Instructions

Upon reviewing the draft Multi-Hazard Mitigation Plan update for Sibley County, please answer the following questions to provide feedback and suggestions. Thank you!

Reviewer Information

- Name
- Email
- Job Title and Organization / Community Resident
- Jurisdiction you are representing

Questions

- After reviewing the mitigation actions for your jurisdiction, do you have any ideas for new ones to add? Please explain in as much detail as possible.
- Are there any issues in your community related to natural hazards that we did not address in the plan? Please explain in as much detail as possible.
- Does this plan reflect the needs of Sibley County to mitigate against future natural hazards? If not, please explain.
- Do you have any other comments or suggestions on the plan before it is submitted to the State of Minnesota and FEMA for approval?
- How did you find out about this planning effort?
 - Colleague
 - Friend
 - Facebook Page
 - County Announcement/Flyer
 - County Email
 - Newspaper
 - Other

The screenshot shows a digital form titled "Sibley County MHMP Feedback & Comments". The form is designed for users to provide feedback on a draft Multi-Hazard Mitigation Plan update. It includes a header with the title and a brief introduction. Below the header, there are several sections for user information and questions. The "Reviewer Information" section includes fields for Name, Organization, Email address, and Job title and Organization / Community Resident. The "Jurisdiction you are in or are representing" section features a list of checkboxes for various jurisdictions: Sibley County, Arlington, Bayline, Sboon, Swanville, Henderson, Le Sueur, New Auburn, Winthrop, and Other. The "Questions" section consists of four text input areas, each preceded by a question: "After reviewing the mitigation actions for your jurisdiction, do you have any ideas for new ones to add? Please explain in as much detail as possible.", "Are there any issues in your community related to natural hazards that we did not address in the plan? Please explain in as much detail as possible.", "Does this plan reflect the needs of Sibley County to mitigate against future natural hazards? If not, please explain.", and "Do you have any other comments or suggestions on the plan before it is submitted to the State of Minnesota and FEMA for approval?". The final question, "How did you find out about this planning effort?", is followed by a list of radio button options: Colleague, Friend, Facebook Page, County Announcement/Flyer, County Email, Newspaper, and Other. At the bottom of the form, there are "Submit" and "Clear Form" buttons.

Appendix H – Minnesota Department of Health Climate & Health Report

Planning for Climate & Health Impacts in Southwest Minnesota

Emergency Management Considerations for HSEM Region 5

Published by the Minnesota Climate & Health Program in August 2018



ABOUT THE REGIONAL PROFILE

EXTREME WEATHER IS A FAMILIAR CONCERN FOR MINNESOTANS

While experience has helped Minnesotans adapt to historical weather patterns, climate change trends are pushing us to adapt even further to weather patterns and extreme events that pose major threats to our health, homes, environment, and livelihood. Over 50 years of storm data on record document that Minnesota has experienced an increase in the number and strength of weather-related natural disasters, particularly those related to rising temperatures and heavy downpours. These events cost our state millions in property loss, damaged infrastructure, disrupted business, medical care and support services, and put residents and responders at risk. Understanding how our weather is changing now and into the future will help planners and decision-makers in emergency management and supporting fields extend our progress in climate adaptation and lead to more resilient communities.

CLIMATE PROJECTION DATA AS A TOOL

Climate projections can help us prepare for the future. These data result from highly sophisticated global climate models and provide a general idea of trends in temperature and precipitation many decades into the future at ever-increasing time and spatial scales. Like every dataset, there are limitations to our understanding and application of the information to real-life decision-making. Yet despite limitations, climate projection data offer a crucial glimpse into our potential futures, and allow us to start considering the best way to allocate our preparedness dollars and management resources to reduce the severe impacts of extreme weather.



Ice storm (Mark Steil, 2013)

PUTTING CLIMATE CHANGE INTO CONTEXT

Sometimes, climate change and extreme weather events and the impact on our communities appear distant and abstract. That is why the Minnesota Department of Health's Minnesota Climate & Health Program teamed up with state and local emergency management and preparedness professionals as well as state climatologists to develop a custom climate profile for each of the six Homeland Security and Emergency Management (HSEM) regions across the state. Each regional profile includes a description of climate change trends along with a summary of climate projection data to illustrate these trends. Regional climate data are presented alongside population projection data, as it's important to consider both our climate future and population future as we plan to minimize risk and build resilience against climate impacts.

Additionally, each regional profile provides a local case study, a "focusing event," to illustrate the links between extreme weather and natural disasters and what climate projection data can (and cannot) signify for similar events in the future. Each case study features a recent natural disaster that impacted the HSEM region and provides a comparison between temperature and precipitation measures related to that event alongside historical baseline trends and future projection estimates. Taken together, the six HSEM regional profiles provide an extensive overview of climate change trends for Minnesota and describe the potential impact of these trends for emergency management and preparedness professionals and their partners.

FOR MORE INFORMATION

A long form report, including all six profiles, individual county data, and a more comprehensive description of climate change trends and supporting research will be available at:

[Minnesota Climate & Health Planning Tools & Data](http://www.health.state.mn.us/divs/climatechange/data.html)
(www.health.state.mn.us/divs/climatechange/data.html)

REGION 5 OVERVIEW

REGION 5: Southwest Minnesota

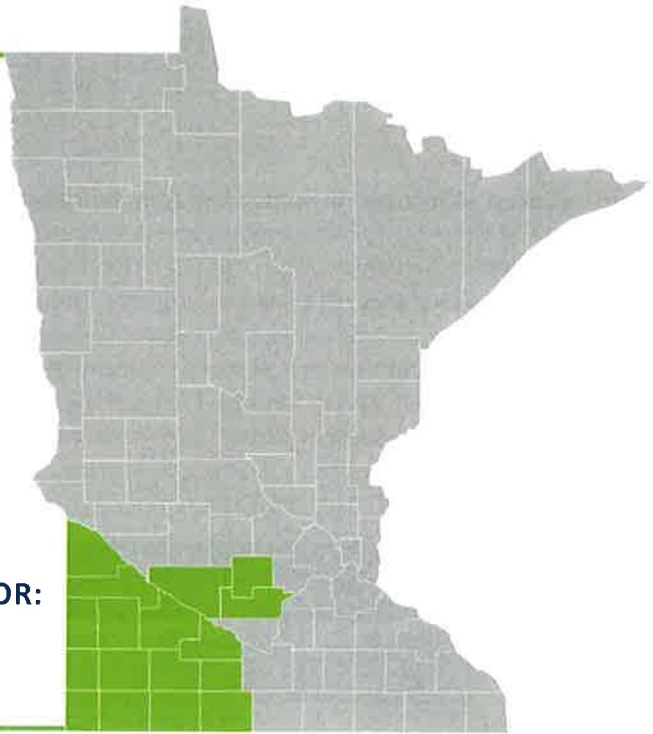
COUNTIES

- Brown
- Chippewa
- Cottonwood
- Jackson
- Lac Qui Parle
- Lincoln
- Lyon
- Martin
- McLeod
- Murray
- Nobles
- Pipestone
- Redwood
- Renville
- Rock
- Sibley
- Watonwan
- Yellow Medicine

HSEM REGIONAL PROGRAM COORDINATOR:

Mark Marcy
651-619-6115

mark.marcy@state.mn.us



MINNESOTA CLIMATE & POPULATION TRENDS

OUR KNOWLEDGE OF CLIMATE CHANGE IS EXPANDING RAPIDLY

Climate records show that across the Midwest and here in Minnesota we are experiencing an increase in warmer, wetter conditions as well as an increase in extreme weather events and related natural disasters. Experts expect these conditions to continue well into the future. By mid-century, Minnesotans can expect much warmer winters, more severe summer heat waves, a higher frequency of very heavy rain events and a higher frequency of late growing season drought conditions.

Many communities in Minnesota rely on economies rooted in agriculture and outdoor recreation, such as wintertime tourism, including snowmobiling, ice fishing, and skiing. Future climate conditions may stress agricultural economies by delaying planting and fieldwork, increasing disease and pest pressure, and reducing crop yields due to cycles of flooding and dry spells. Rapidly warming winter temperatures will turn snowfall into rain and reduce the depth and timing of lake ice cover, affecting winter recreation.

Extreme rainfall events will increase flood risk, particularly in floodplain areas, disrupting transportation and utility service, and damaging property and infrastructure. In addition, surface runoff may lead to soil erosion, lake pollution, and reduced drinking water quality. Nutrient runoff in particular, along with warmer temperatures, are likely to contribute to a larger occurrence of harmful algal blooms on waters, many valued for recreation. Changing climate conditions are likely to strain the viability of native species, including popular recreational fish, invite encroachment by invasive species, and increase the geographic range and types of ticks and mosquitoes.

Some of these trends are evident in the current climate projection data that are available. However, because these data are often averaged or summarized for large areas over large time periods, they can mask the local peaks in temperature and precipitation that can trigger disasters. Until more finely-scaled climate projection data become available to Minnesota planners and decision-makers, the current data still remain useful for exploring the future ahead and establishing a baseline understanding of what our weather challenges may be moving forward.

REGION 5 CLIMATE PROFILE

Use the following information on temperature, precipitation, and vulnerable populations to help plan for future weather-related incidents.

TEMPERATURE

There has been an increase in winter and summer temperatures. Our average winter lows are rising rapidly, and our coldest days of winter are now warmer than we have ever recorded. In fact, Minnesota winters are warming nearly 13 times faster than our summers. The continued rise in winter temperatures will result in less snow pack, which will increase chances for grassland/wildfires as well as drought. The warmer winter temperatures will also have major consequences for our ecosystems, including native and invasive species, whose growth, migration, and reproduction are tied to climate cues. The increase in Lyme disease across Minnesota is also likely influenced in part by the loss of our historical winters, due to a longer life-cycle period for ticks. Freeze-thaw cycles are likely to increase as well, damaging roads, power lines, and causing hazardous travel conditions. By mid-century our average summer highs will also see a substantial rise, coupled with an increase in more severe, prolonged heat waves that can contribute to drought and wildfires and pose a serious health threat, particularly to children and seniors. Here are temperature trends for HSEM Region 5:



Average Summer Maximum Temperature for HSEM Region 5		
1981-2010	2050-2075	Change
82.1 °F	89.6 °F	+7.5 °F



Average Winter Minimum Temperature for HSEM Region 5		
1981-2010	2050-2075	Change
7.9 °F	16.9 °F	+9.0 °F

PRECIPITATION

There has been an increase in total average as well as heavy precipitation events, with longer periods of intervening dry spells. Our historical rainfall patterns have changed substantially, giving rise to larger, more frequent heavy downpours. Minnesota’s high-density rain gauge network has captured a nearly four-fold increase in “mega-rain” events just since the year 2000, compared to the previous three decades. Extreme rainfall events increase the probability of disaster-level flooding. However, there is also an increased probability that by mid-century heavy downpours will be separated in time by longer dry spells, particularly during the late growing season. Over the past century, the Midwest hasn’t experienced a significant change in drought duration. However, the average number of days without precipitation is projected to increase in the future, leading Minnesota climate experts to state with moderate-to-high confidence that drought severity, coverage, and duration are likely to increase in the state. Modeling future precipitation amounts and patterns is less straight-forward compared to temperature. Some climate models do a better job than others representing rainfall for the Midwest, and available data sources only provide average estimates on a monthly scale, masking the spikes in extremes that trigger flood and drought disasters. Trend data provided here for HSEM Region 5 are summarized for early summer, when historically Minnesota receives most of its rainfall, and for early fall when rainfall scarcity may threaten crop harvests and local agricultural economies:



Average Early Summer Precipitation for HSEM Region 5		
1981-2010	2050-2075	Change
3.8"	4.4"	+0.5"



Average Early Fall Precipitation for HSEM Region 5		
1981-2010	2050-2075	Change
2.5"	2.4"	-0.1"

VULNERABLE POPULATIONS

There has been an increase in the older adult population. Extreme weather events cause a range of health impacts and disruptions that vary across population groups. The vulnerability of a group is a function of its sensitivity to a hazard, exposure to risks, and capacity for responding or coping with the impacts. Children and older adults are often identified as groups vulnerable to climate change threats, including extreme weather and natural disasters. For example, physiologically these groups have a lower capacity to tolerate extreme heat and are often dependent on others for transportation to cooling centers. These groups are also often critically dependent on others during a disaster, such as needing help to evacuate during a flood or wildfire, or to find alternative housing if displaced. Planning for the specific needs of vulnerable populations strengthens local efforts to reduce the impact of extreme weather-related events. Population trend data provided here for HSEM Region 5 are intended to highlight the changes in two key demographic groups for the region, but planners and managers should also consider future changes in other populations of concern, such as those with low incomes, immigrant groups, indigenous peoples, persons with disabilities, or vulnerable occupational groups (such as outdoor workers):



Childhood Population (0-14) Projection Estimates for HSEM Region 5

2015	2050	Change
51,634	42,313	-18.1%



Elder Population (65+) Projection Estimates for HSEM Region 5

2015	2050	Change
53,580	59,580	+12.4%

REGION 5 CASE STUDY

The following case study is intended to illustrate the links between climate and weather and natural disasters. Acting as a “focusing event,” the case study demonstrates how a previous weather-related event (i.e., ice) impacted important economic drivers, environmental resources, and population health. Then, the Climate Projection Data section compares weather data from the case study with baseline and projected weather data to show the possibilities of future disaster events. This case study highlights the relevancy of climate projection data for understanding future climate and weather risks in Minnesota.

EVENT: ICE STORM

DATE: APRIL 9-12, 2013

A devastating ice storm hit southwestern Minnesota in the spring of 2013. Southwestern Minnesota is in a relatively high-frequency corridor of ice storms, partially due to the Buffalo Ridge where the higher elevation often cools the air just enough to turn rain into freezing rain. A combination of freezing rain and wet, heavy snow brought down trees and powerlines throughout the area leading to widespread power outages and extremely dangerous driving conditions. The heaviest coating of ice was around the cities of Worthington and Luverne with nearly an inch of ice reportedly coating these areas. Conditions required the city of Worthington to declare a state of emergency and resort to rolling blackouts to keep homes habitable and avoid having to open emergency shelters. To enable disaster relief support, the federal government declared five counties disaster areas in the aftermath of the storm: Cottonwood, Jackson, Murray, Nobles, and Rock.

REGION 5 CASE STUDY: KEY IMPACTS

It is nearly impossible to capture all the various impacts from a natural disaster. These impacts broadly include costly infrastructure damage, disrupted utility service, prolonged work and school absences, acute physical injury, and persistent strains on mental health, on scales ranging from the community to the household to the individual.

The extensive costs associated with the 2013 April ice storm event are difficult to capture in a single estimate. One report puts damage costs at about \$71 million. However, this estimate does not take into account the loss to businesses that were forced to close or medical expenses for injuries linked to slips, falls, or car accidents.

The following are just a few examples of the adverse impacts on HSEM Region 5 communities and others from the 2013 April ice storm:

DISRUPTION OF ESSENTIAL SERVICES:

Widespread power outages left many communities and farms without electricity or heat during a prolonged period of cold temperatures. More than 100,000 customers across southwest Minnesota were impacted by power disruptions. Some rural customers did not have power restored for multiple days. The widespread loss of power affected communications along with electric, heat, and water services to homes, schools, businesses, and fire stations.

BUDGET STRAINS: In several small communities, costs of responding to the disaster consumed their public works budget for the entire year. To assist with hazards and power loss, the Governor activated the National Guard.

DIRECT HEALTH THREAT: Snow- and ice-covered roads, coupled with downed trees and utility poles, made for extremely dangerous driving conditions. During a single 8-hour period on April 10th, State Patrol reported at least 736 crashes and spinouts, 39 involving serious injuries.

EVACUATIONS & CLOSURES: Due to power outages, one medical center was forced to run entirely on its own generators, while others, including a nursing home and a juvenile detention center, needed to evacuate residents and patients to other areas. In order to reduce demand on the fragile power grid and ensure public safety, a number of businesses, schools, and campgrounds were closed.



Powerlines down in Worthington, Minnesota (Mark Steil, 2013)



“

During a single 8-hour period on April 10th, State Patrol reported at least 763 crashes and spinouts, 39 involving serious injuries.

”



*Top: Car covered in fallen branches in Worthington, Minnesota (Julie Buntjer, 2013)
Bottom left: Ice storm in Westbrook, Minnesota (Paul Jones, 2013)
Bottom right: Bus off the road in Elk River, Minnesota (Mandi Cline-Elken, 2013)*

CLIMATE PROJECTION DATA

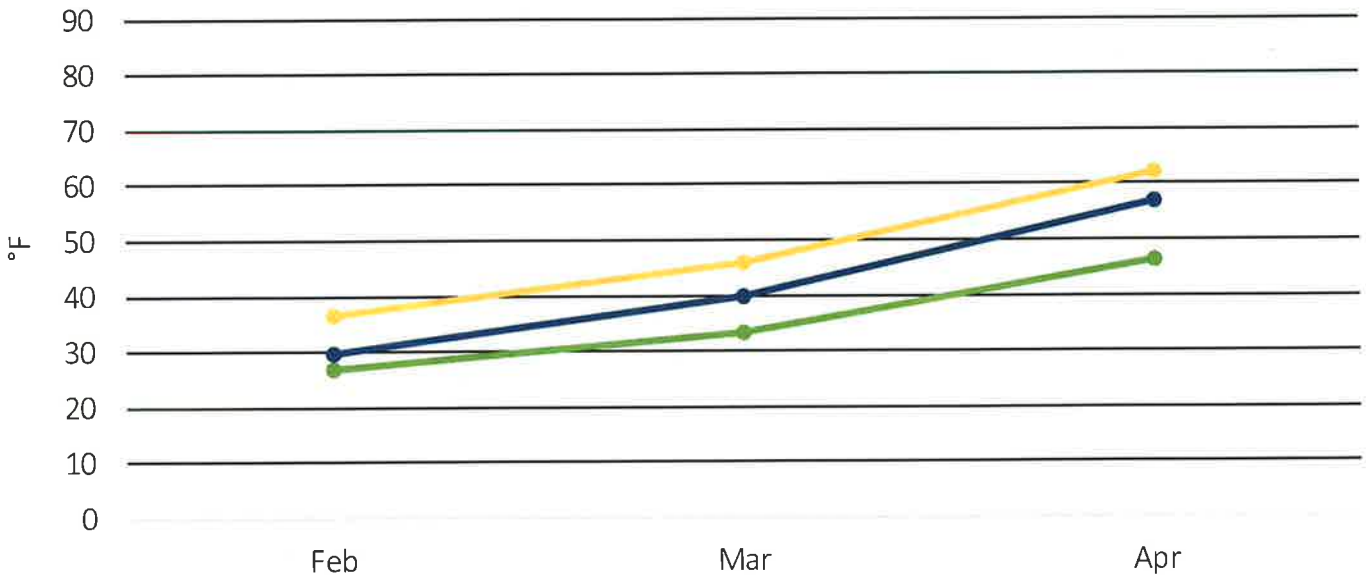
Following are visual representations of climate projection data for Region 5. Data for all counties included in Region 5 were averaged to derive regional estimates. (Data for individual counties are available in the long-form report.) The graphs below compare future temperature and precipitation projection data (in yellow) with a historical climate baseline (in blue) and climate measures from the regional case study event (in green). Because preceding conditions can influence a disaster event, data from February through April are provided to provide context.

LEGEND

- **Historical:** 1981- 2010
- **Case Study:** 2013 ice storm
- **Projected:** 2050- 2074

Maximum Temperature

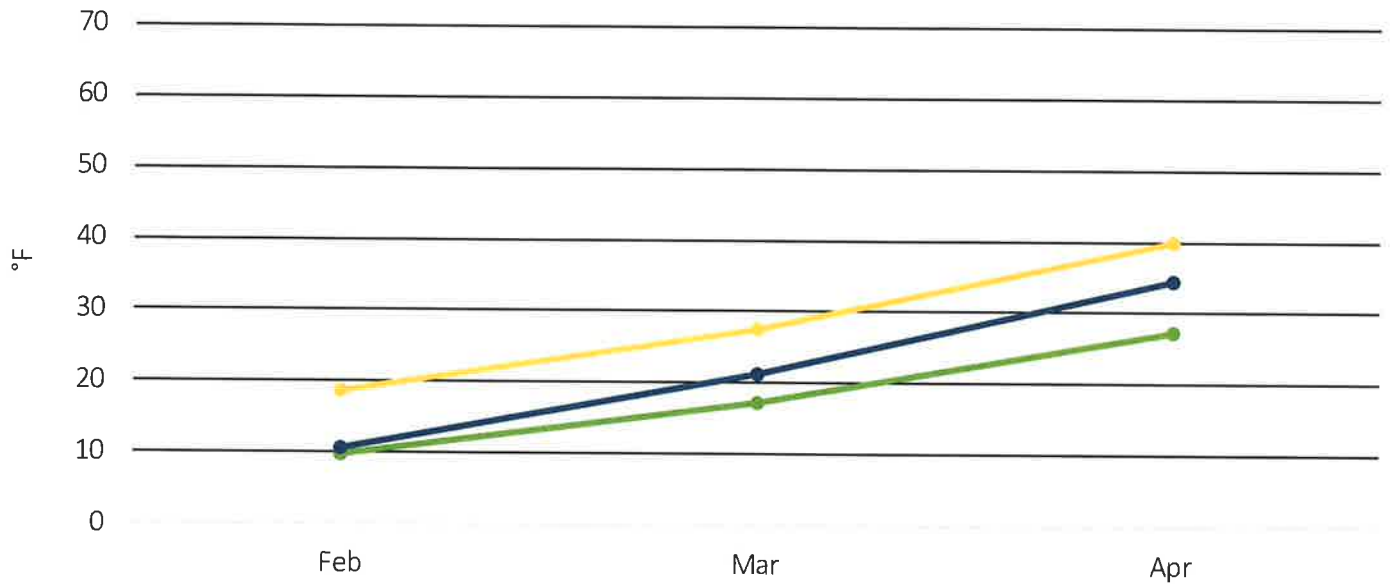
Trend comparison to 2013 ice storm data



	February	March	April
Historical: 1981- 2010	29.7	39.9	57.1
Case Study: 2013 ice storm	26.8	33.3	46.5
Projected: 2050- 2074	36.4	46.0	62.3

Minimum Temperature

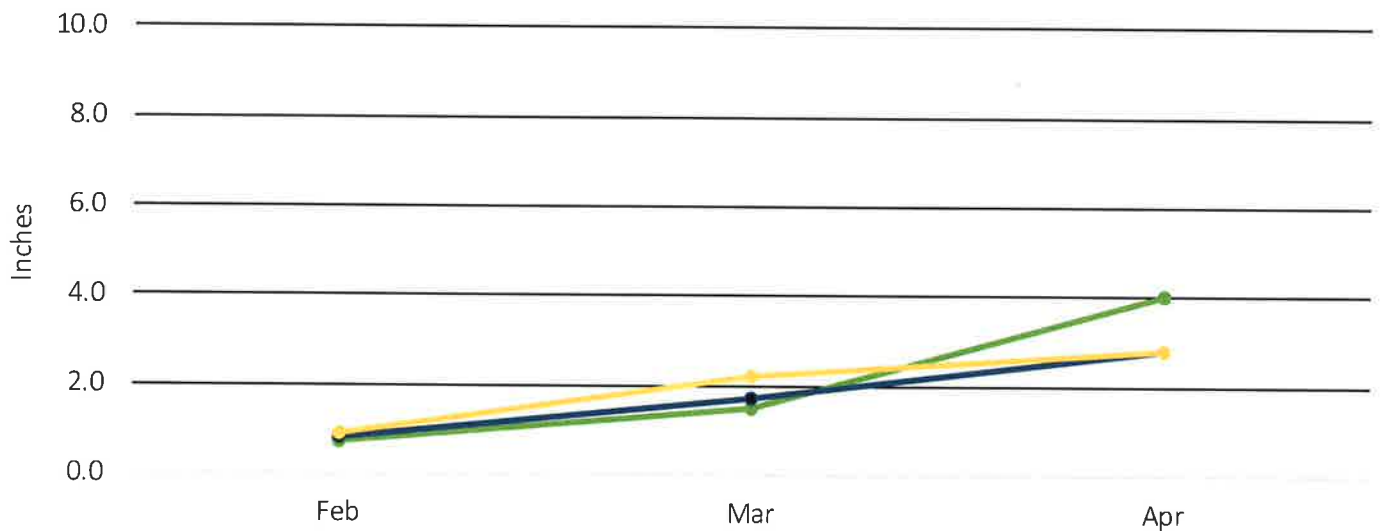
Trend comparison to 2013 ice storm data



	February	March	April
Historical: 1981- 2010	10.7	21.1	34.3
Case Study: 2013 ice storm	9.9	17.2	27.4
Projected: 2050- 2074	18.6	27.6	39.8

Total Precipitation

Trend comparison to 2013 ice storm data



	February	March	April
Historical: 1981- 2010	0.8	1.7	2.8
Case Study: 2013 ice storm	0.7	1.5	4.0
Projected: 2050- 2074	0.9	2.2	2.8

SUMMARY

CLIMATE DATA EXPERTS expect that future climate conditions across the Midwest will continue to change and affect our environment, economy, and public health. Such conditions are projected to lead to a higher frequency of late growing season drought conditions, elevated winter temperatures with reduced snowpack, prolonged high heat days, and extreme rainfall events. Climate experts also anticipate an increased frequency of severe storms, including heavy ice and snowstorms, like the April 2013 event. Yet, researchers are still working to understand the relationships between climate change and these diverse types of hazardous weather. A fair amount of uncertainty exists as to when, where, why, and how these storms will arise. Currently there is no straight-forward answer to the question, “Will Minnesota experience more extreme snow and ice storms in the future?” Although warmer and shorter winters will lead to more liquid-precipitation events, it is also probable that those same conditions will convert some systems that historically would have been snowstorms into ice storms. Additionally, the higher terrain of the Buffalo Ridge will always make freezing rain somewhat more likely than more topographically-even parts of the state, so the odds of additional ice storms in the future are naturally higher than in most other parts of Minnesota.

This is an area where the available climate projection data alone may not be enough to provide a clear picture of future weather events for planning efforts. In fact, a review of the data in the graphs above suggest that Region 5 counties may experience fewer extreme cold-related weather events since temperatures are increasing well above those associated with the 2013 ice storm. Thus, it is important to track climate research and expert consensus on future climate trends in order to critically assess and apply projection data.

CLIMATE DATA IS A CRITICAL TOOL in planning for resilient communities into the future. Assessing threats from climate change and planning effective mitigation and response strategies is a key element for emergency managers and other planners to reduce future risk. It is crucial to understand the potential impacts of climate change and the associated priorities and vulnerabilities of communities, including population, the environment, critical infrastructure, and more. However, vulnerability is a nuanced concept and most effective as an indicator of risk when planners seek to understand and address vulnerability as close to the individual level as possible and in association with a specific hazard.

“ *Climate data is a critical tool in planning for resilient communities into the future.* ”

Population projections for HSEM Region 5 show a decrease in children but an increase in elders. As older populations tend to have a greater need for health care services, disrupted access due to ice covered roads or power outages is a major concern. Additionally, older individuals are more susceptible to slips, falls, and injuries and have a longer recovery period. Considering the impacts of climate change to vulnerable populations is just one example of how to prioritize mitigation and response planning.

CLIMATE PROJECTION DATA continues to improve and should be considered as a priority to advance for Minnesota. Currently, global climate models that produce climate projection data for the Midwest are more accurate at simulating future temperature changes than they are for precipitation. However, the accuracy and resolution of these models are advancing rapidly as are their ability to model the future prevalence in short-duration, high-intensity localized heavy rainfall events.

Minnesota would benefit from a statewide high-quality climate projection dataset that is derived using the climate and environment features unique to our state, similar to datasets developed for other states. Meanwhile, data from national resources, like the U.S. Geological Survey (USGS) and National Oceanic and Atmospheric Administration (NOAA), can still provide a powerful input to regional scenario-planning efforts by allowing planners, managers, and analysts a means of “unpacking” general climate change predictions for the Midwest by looking at potential monthly fluctuations in coarse precipitation and temperature measures for Minnesota and its counties.

NEXT STEPS: MINIMIZE RISK & BUILD RESILIENCE

Prepare today for tomorrow's climate hazards. Emergency managers, planners, elected officials, and the public play a critical role in creating safe and healthy communities, especially in the face of extreme weather events. There are steps you can take to minimize local risk and build more resilient communities:



BRING EVERYONE TO THE TABLE: Build an inclusive yet nimble team to collectively identify climate hazards and potential impacts. Be sure to include members of the community; local department professionals responsible for built, natural, and health resources; planning commissioners; faith-based and cultural organizations; research centers; and commercial organizations. Including diverse perspectives throughout your process will help support more equitable planning efforts that best leverage cross-functional resources.



INCORPORATE CLIMATE INTO PLANNING: Incorporate climate projection data into planning efforts, such as exercise scenarios and long-range planning, to comprehensively identify future climate hazards and potential cascading effects. Explore how these interact with non-climate hazards in the community, such as aging infrastructure, to understand potential exposure to multiple threats and prioritize actions that build the community's capacity to respond.



CHAMPION CLIMATE & HEALTH: Be a champion for climate and health data. Seek opportunities to learn about these data and incorporate it in your work on an iterative basis. Support its application in professional networks and articulate the need to fund dynamically downscaled climate projection datasets for Minnesota. Climate data is a critical multi-discipline tool in proactively planning for resilient communities.

RESOURCES & REFERENCES

TOOLS & DATA

- [Climate at a Glance: National Climatic Data Center](http://www.ncdc.noaa.gov/cag/), National Oceanic and Atmospheric Administration
Source for all historical and much of the case study data presented in this profile.
www.ncdc.noaa.gov/cag/
- [Minnesota Climate and Health Profile Report \(PDF\)](http://www.health.state.mn.us/divs/climatechange/docs/mnprofile2015.pdf), Minnesota Department of Health
Profiles historic climate trends, future projections, and likely climate change impacts on the health of Minnesotans.
<http://www.health.state.mn.us/divs/climatechange/docs/mnprofile2015.pdf>
- [Minnesota Climate Change Vulnerability Assessment \(PDF\)](http://www.health.state.mn.us/divs/climatechange/docs/mnclimvulnreport.pdf), Minnesota Department of Health
Assesses five climate hazards and the populations that are most vulnerable to the hazards in Minnesota.
<http://www.health.state.mn.us/divs/climatechange/docs/mnclimvulnreport.pdf>
- [Minnesota Population Projection Data](https://mn.gov/admin/demography/data-by-topic/population-data/our-projections/), Minnesota State Demographic Center
Source for all population projection data presented in this profile.
<https://mn.gov/admin/demography/data-by-topic/population-data/our-projections/>
- [National Climate Change Viewer](http://www2.usgs.gov/climate_landuse/clu_rd/nccv/viewer.asp), United States Geological Survey
Source for all climate projection data presented in this profile.
www2.usgs.gov/climate_landuse/clu_rd/nccv/viewer.asp

RESOURCES & REFERENCES

KNOWLEDGE & CAPACITY

- [Climate Change and Minnesota](https://www.dnr.state.mn.us/climate/climate_change_info/index.html), Minnesota Department of Natural Resources
Source of information on climate change trends and impacts for Minnesota, with an emphasis on natural resources.
https://www.dnr.state.mn.us/climate/climate_change_info/index.html
- [Five Steps Toward Enhancing Climate Resilience](https://www.domesticpreparedness.com/resilience/five-steps-toward-enhancing-climate-resilience/), Emily Wasley, DomesticPreparedness.com
Practical action steps to help emergency managers build a path to enhance their climate resilience.
<https://www.domesticpreparedness.com/resilience/five-steps-toward-enhancing-climate-resilience/>
- [Snowstorms and Extreme Cold](https://www.ready.gov/winter-weather), Department of Homeland Security
Health and safety information aimed at individuals and households on responding to snow, ice, and extreme cold.
<https://www.ready.gov/winter-weather>
- [U.S. Climate Resilience Toolkit](https://toolkit.climate.gov/), United States Global Change Research Program
Information and tools to help communities adapt to climate change, featuring real-world case studies.
<https://toolkit.climate.gov/>
- [Winter Weather](https://www.cdc.gov/disasters/winter/index.html), Centers for Disease Control and Prevention
Health and safety information on preparing for and responding to winter weather, including power outages.
<https://www.cdc.gov/disasters/winter/index.html>

REFERENCES

- Cohen et al., 2018. [Warm Arctic Episodes Linked with Increased Frequency of Extreme Winter Weather in the United States](https://www.nature.com/articles/s41467-018-02992-9.pdf) (PDF). Nature Communications.
<https://www.nature.com/articles/s41467-018-02992-9.pdf>
- Minnesota Department of Natural Resources, 2013. [Winter Storm: April 9-12, 2013](https://www.dnr.state.mn.us/climate/journal/130412_winter_storm.html).
https://www.dnr.state.mn.us/climate/journal/130412_winter_storm.html
- Minnesota Department of Public Safety, 2013. [2013 Spring Ice Storm in Southwest Minnesota](https://www.ready.gov/winter-weather) (PDF).
<https://www.ready.gov/winter-weather>



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Front cover photo: Residential street during 2013 ice storm (Toronto Hydro Corporation, 2013)

Minnesota Department of Health

Climate & Health Program

health.climatechange@state.mn.us

651-201-4899

www.health.state.mn.us/divs/climatechange/



Appendix I – Critical Infrastructure

Appendix I

Sibley County Critical Infrastructures

Healthcare Facilities

Name	Address	City	Zip	Type
High Island Creek Residence	708 Chestnut Drive	Arlington	55307	Supervised Living Facilities
Good Sam Society Winthrop	506 High Street	Winthrop	55396	Nursing Homes
Good Sam Society Arlington	411 Seventh Avenue NW	Arlington	55307	Nursing Homes
Oak Terrace Health Care Center	640 Third Street	Gaylord	55334	Nursing Homes
Golden Hearts Inc	602 Marion Drive	Arlington	55307	Nursing Homes
Good Samaritan Society	409 7th Ave NW	Arlington	55307	Nursing Homes
Ridgeview Sibley Medical Center	601 West Chandler	Arlington	55307	Hospitals

Emergency Services

Name	Address	City	Zip	Type
Sibley County Emergency Operations Center	400 Court Avenue	Gaylord	55334	Emergency Operations Centers (EOC)
Sibley County Sheriffs Department / Sibley County Jail	419 Harrison Street	Gaylord	55334	Law Enforcement Facilities
Gaylord Police Department	220 Jefferson Avenue East	Gaylord	55334	Law Enforcement Facilities
Winthrop Police Department	305 North Main Street	Winthrop	55396	Law Enforcement Facilities
Gibbon Police Department	985 1st Avenue	Gibbon	55335	Law Enforcement Facilities
Henderson Police Department	600 Main Street	Henderson	56044	Law Enforcement Facilities
Arlington Police Department	108 4th Ave NW	Arlington	55307	Law Enforcement Facilities
Winthrop Volunteer Fire Department	3 North Main Street	Winthrop		Fire Stations
Arlington Fire Department	310 West Alden Street	Arlington		Fire Stations
Green Isle Fire Department	390 Parnell Street	Green Isle		Fire Stations
Gibbon Fire Department	1137 1st Avenue	Gibbon		Fire Stations
New Auburn Fire Department	8402 4th Street	New Auburn		Fire Stations
Gaylord Fire Department	200 State Highway 5 East	Gaylord		Fire Stations
Henderson Fire Department	205 North 5th Street	Henderson		Fire Stations

Schools & Shelters

Name	Address	City	Zip	Type
Altona Christian School	35227 290th St	Henderson	56044	School
Immanuel Lutheran School	417 High Ave	Gaylord	55334	School
St Paul Lutheran School	510 W Adams St	Arlington	55307	School
St Peters Lutheran School	63872 240th St	Gibbon	55335	School
Holy Family Academy	10679 182nd St	Belle Plaine	56011	School
Green Isle Community School	190 McGrann St	Green Isle	55338	School
G.F.W. High School	1001 Cottonwood St	Winthrop	55334	School
Minnesota New Country School	210 Main St	Henderson	56044	School
Starland Elementary	59917 236th St	Gibbon	55335	School
G.F.W. Elementary	323 E 11th St	Gibbon	55335	School
Hilltop Elementary	700 S St	Henderson	56044	School
Sibley East-Arlington Senior High	202 3rd Ave NW	Arlington	55307	School
Sibley East-Arlington Elementary	202 3rd Ave NW	Arlington	55307	School
Minnesota New Country Elementary	127 North 8th Street	Henderson	56044	School
Sibley East-Gaylord Junior High School	PO Box 356	Gaylord	55334	Shelter
Sibley East High School	202 3rd Ave	Arlington	55307	Shelter
Gaylord Nursing Home	640 3rd St	Gaylord	55334	Shelter
Arlington Community Center	204 Shamrock Drive	Arlington	55307	Shelter
Sibley East-Gaylord Elementary School	625 Harvey Dr	Gaylord	55334	School
Sibley East Middle School	202 3rd Ave NW	Arlington	55307	School

Utilities

Name	Address	City	Zip	Type
Hometown Windpower Arlington				Wind Turbine
Hometown Windpower Winthrop				Wind Turbine
Arlington Wastewater Treatment Plant	610 Freedom Dr	Arlington	55307	Wastewater Treatment Plant
Gibbon Wastewater Treatment Plant	Highway 19	Gibbon	55335	Wastewater Treatment Plant
Henderson Wastewater Treatment Plant	1600 Locust St	Henderson	56044	Wastewater Treatment Plant
New Auburn Wastewater Treatment Plant	5th St	New Auburn	55366	Wastewater Treatment Plant
Winthrop Wastewater Treatment Plant	9th & Carver	Winthrop	55396	Wastewater Treatment Plant
Green Isle Water Treatment Plant	McGann St & Pine St	Green Isle	55338	Wastewater Treatment Plant
Le Sueur Wastewater Treatment Plant	Highway 169	Le Sueur	56058	Wastewater Treatment Plant
Arlington Water Treatment Plant	Henderson Rd	Arlington	55307	Wastewater Treatment Plant

Utilities

Name	Address	City	Zip	Type
Heartland Corn Products	53331 State Hwy. 19	Winthrop	55396	Ethanol
Gibbon Solar		Gibbon	55335	Solar
Mud Garden Solar		Gaylord	55334	Solar
Erin Garden Solar		City Of Green Isle	55338	Solar
Assumption	Great River Energy			Electrical Infrastructure
Jessenland	Great River Energy			Electrical Infrastructure
High Island	Great River Energy			Electrical Infrastructure
Heartland	Great River Energy			Electrical Infrastructure
Cornish	Great River Energy			Electrical Infrastructure
Gaylord	Xcel Energy, Inc.			Electrical Infrastructure
Crystal Foods	Xcel Energy, Inc.			Electrical Infrastructure
Henderson	Xcel Energy, Inc.			Electrical Infrastructure
Arlington	Xcel Energy, Inc.			Electrical Infrastructure

Hazardous Materials Facilities

Hazardous Materials Facilities have been omitted from this document due to security considerations.

Major Employers

Name	Address	City	Zip
Michael Foods	120 Tower St	Gaylord	55334
Michael Foods	430 Railroad Ave	Gaylord	55334
Michael Foods	45161 State Highway 19	Gaylord	55334
Dairy Farmers of America	212 E 1st St	Winthrop	55396
Unidoor Corp.	47709 MN-19	Gaylord	55334
Heartland Corn Products	53331 MN-19	Winthrop	55396
Control Assemblies Co	740 Railroad Ave	Gaylord	55334
United Farmers Cooperative	705 E 4th St	Winthrop	55396

County Buildings

Name	Address	City	Zip
Sibley County Court House	400 Court Ave	Gaylord	55334
Sibley County Sheriff's Office & Jail	419 Harrison St	Gaylord	55334
Sibley County Service Center	111 8th St	Gaylord	55334

Appendix J – Mitigation Actions by Jurisdiction

City of Arlington Mitigation Action Chart

CITY OF ARLINGTON							Mitigation Action Chart	
#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding	
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's CodeRED emergency notification alert system. Also update the city alert system.	New High Ongoing	City Admin, City EM	We have not done anything to date. We can use our city website and city Facebook page to encourage residents to sign up for the county system. We also are looking into using PublicAlert for the city.	City	
2	Severe Winter & Summer Storms	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather and extended power outages.	New High Ongoing	City Admin, City EM	Same as above.	City	
3	Severe Winter & Summer Storms	Structure & Infrastructure Projects	Continue to remove trees in boulevards that pose a risk to storm damage.	Existing High Ongoing	City PW	Within the last 5 years our public works department has focused its attention on trees in boulevards that pose a risk to storm damage and the budgeting for tree removal has tripled in the last 3 years.	City	
4	Flooding	Structure & Infrastructure Projects	Complete street reconstruction on the west/northwest end of town which will help solve the flooding/sewage backup issues.	In-Progress High 2021 - 2026	City PW	The city also uses its own budget and also bonds to help fund street reconstruct projects.	City	

City of Gaylord Mitigation Action Chart

CITY OF GAYLORD

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High Ongoing	City Admin, City EM	A link for the county's CodeRed system is posted on our website and city Facebook pages. We also provide information to new residents on how to sign up for emergency notifications.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather and extended power outages.	Existing High Ongoing	City Admin, City EM	We will use our communication channels to increase public outreach and share information from Sibley County Emergency Management.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	We need portable generators for our City Hall, fire department, and EMS building.	New High TBD	City Admin, City EM, City PW	Future purchase of generators is part of the city's emergency preparedness planning.	City
4	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify a mass care shelter within the city to open in the event people are temporarily displaced due to storm damage or extreme temps with a power outage.	New High TBD	City Admin, City EM	The city will work to evaluate our current facilities that may be used for temporary sheltering.	City
5	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Assist the nursing home and assisted living facility with emergency plans in the event of severe weather and power outages.	New High Ongoing	City Admin, City EM	We are in contact with all of our long-term care facilities and encourage them to be ready with emergency power and plans in the event of severe storms that cause power outages.	City
6	Severe Summer Storms	Structure & Infrastructure Projects	Construct a storm shelter or tornado safe room for our residents that do not have basements and for our residents that live in the mobile home park.	New High TBD	City Admin, City EM	The city will work with the mobile home park operator and Sibley County Emergency Management to see what will best serve the MHP residents and others in the community. Future construction of a facility is to be determined by feasibility and available funding.	City, FEMA HMA grant

CITY OF GAYLORD**Mitigation Action Chart**

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
7	Severe Summer Storms	Structure & Infrastructure Projects	Purchase & install another outdoor warning siren.	New High TBD	City Admin, City EM, City PW	The city is currently looking at purchasing another outdoor warning siren to better cover all parts of the city. A grant application may be made to the USDA Community Facilities grant program for funding to purchase the siren.	City, USDA CF Grant
8	Flooding	Structure & Infrastructure Projects	Implement planned infrastructure projects for the city to reduce risks of localized flooding and impacts to critical services resulting from high rain events.	In-Progress High 2021	City PW	The city is adding a storm water pond in 2021. We are also getting two new pumps at our lift stations.	City

City of Gibbon Mitigation Action Chart

CITY OF GIBBON							
Mitigation Action Chart							
#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High Ongoing	City Admin, City EM, City Fire Chief	We use the Gibbon Fire & Rescue Facebook page.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather and extended power outages.	Existing High Ongoing	City Admin, City EM, City Fire Chief	Same as above.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Obtain a generator for our water treatment plant for backup power in the event of extended power outages from storms.	New High TBD	City Admin, City EM, City PW, City Fire Chief	This effort is part of the city's planning to protect critical infrastructure and essential services. We are hoping to receive a grant to purchase a generator. The City of Gibbon FD continues to provide emergency notification support to campers in the event of severe weather. It will be an important measure for Sibley County to install a new outdoor warning siren at this park location to better alert campers.	City, Other (TBD)
4	Severe Summer Storms	Structure & Infrastructure Projects	Continue to provide emergency notification support to campers at the Clear Lake County Park south of Gibbon during severe weather events.	New High TBD	City Fire Chief		City

City of Green Isle Mitigation Action Chart

CITY OF GREEN ISLE Mitigation Action Chart							
#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's CodeRED emergency notification alert system.	New High Ongoing	City Admin, City EM	We can update the "Emergency Info" on the city website for Sibley County Sheriff's Office to include information on signing up for emergency notifications. We also have a city Facebook page we can use.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe storms and extended power outages.	New High Ongoing	City Admin, City EM	We can share information from Sibley County Emergency Management on our city website and city Facebook page.	City
3	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Obtain a backup generator for the fire hall.	New High TBD	City Admin, City EM	We will purchase a portable generator as city funding allows.	City

City of Henderson Mitigation Action Chart

CITY OF HENDERSON

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High Ongoing	City Admin, City EM	We make announcements at meetings, Bulletin Boards, Local Media, and social media.	City
2	Severe Winter & Summer Weather	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather and extended power outages.	New High Ongoing	City Admin, City EM	We can use city website & Facebook to encourage residents to be prepared and share information from Sibley County Emergency Management.	City
3	Severe Winter & Summer Weather	Mitigation Preparedness & Response Support	Purchase generators for our water tower and 2 lower pump stations for backup power in the event of power outages from severe storms.	New High TBD	City Admin, City PW	The city will purchase generators as funding allows.	City
4	Flooding	Local Planning & Regulations	Identify flood mitigation strategies for the city including plans for improving our stormwater management.	In-Progress High Ongoing	City Admin, City EM, City PW	We are also discussing flood mitigation options with FEMA officials. In addition, we are working with the city engineer to develop storm water management and retention plans.	City, FEMA HMA, Other (TBD)
5	Flooding	Local Planning & Regulations	Work with MnDOT and Sibley SWCD to address the need for a western road access to the city.	In-Progress High TBD	City Admin, City EM, City PW	The city is working with state officials through the current bonding bill to try and deal with road access issues during flooding. We also work closely with the SWCD.	City, State Bonding Bill

City of Le Sueur Mitigation Action Chart

CITY OF LE SUEUR							Mitigation Action Chart	
#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding	
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's Everbridge emergency notification alert system.	Existing High Ongoing	City Admin, City EM	We use our city website to promote both the Sibley County CodeRED system and the Le Sueur County Everbridge system. We would like to convert an unused municipal space that lacks usage into a community storm shelter and community mass care center. The space would be converted to a gym that could hold a large amount of people from the community during a tornado or other inclement weather event. The space is centrally located within the city. We can confer with Sibley County Emergency Management on as we move forward.	City	
2	Severe Summer Storms	Mitigation Preparedness & Response Support	Establish a centralized facility to serve as a community storm shelter and mass care center.	New High 2021-2022	City Admin, City EM	We will work with the MHP operator and Sibley County Emergency Management to determine what kind of facility is best to protect residents. We are looking at a FEMA grant to construct a tornado shelter somewhere in the future. The current location of our compost site is "temporary" as we are waiting for the MnDOT facility on CSAH 22 to become available.	City	
3	Severe Summer Storms	Structure & Infrastructure Systems	Construct a storm shelter or tornado safe room for the mobile home park within the city.	New High TBD	City Admin, City EM		City, FEMA HMA grant	
4	Flooding	Local Planning & Regulations	Purchase land to relocate our compost site that is affected by flood waters nearly every spring.	New High TBD	City Admin, City EM		City, Other (TBD)	

City of New Auburn Mitigation Action Chart

CITY OF NEW AUBURN

Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's CodeRED emergency notification alert system.	Existing High Ongoing	City Admin, City EM	When a resident applies for water & sewer services, they automatically get signed up for our Public Alert System through our water/sewer program. We have a city website & city Facebook page where we can encourage residents to sign up for the county system as well.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather and extended power outages.	Existing High Ongoing	City Admin, City EM	Our fire department participates in Severe Spring Weather Awareness Week. In April we use our newsletter to post about spring severe weather awareness information. We have a city website and a city Facebook page where we can continue to share information with the public.	City
3	Severe Summer Storms	Structure & Infrastructure Projects	Construct a storm shelter or tornado safe room for the mobile home park (Divine Acres) within the city.	New High TBD	City Admin, City EM, City PW	We will work with the MHP operator and Sibley County Emergency Management to determine what kind of structure is best to protect residents. If a tornado safe room is determined the city may seek future funding from FEMA for a safe room grant.	City, Other (TBD)
4	Flooding	Structure & Infrastructure Projects	Upgrade the city's sanitary and storm sewer system to better handle future high rain events.	Existing High TBD	City PW	The city is currently in the process of having pre-engineering plans drawn up for our sanitary and storm water systems. We will be applying for grants to assist with this cost.	City, Other (TBD)
5	Flooding	Education & Awareness Programs	Encourage residents to maintain their sump pumps to reduce the chances of basement flooding during high rain events.	Existing Moderate Ongoing	City Admin	Each spring and winter we do outreach to homeowners on sump pump maintenance.	City

City of Winthrop Mitigation Action Chart

CITY OF WINTHROP Mitigation Action Chart

#	Hazard	Mitigation Strategy	Mitigation Action	Status Priority Timeframe	Responsibility	Comments on Implementation & Integration	Possible Funding
1	All-Hazards	Education & Awareness Programs	Encourage all city residents to sign-up for the county's CodeRED emergency notification alert system.	New High Ongoing	City Admin, City EM	We have not done anything to date. We can use the city website & Facebook page.	City
2	Severe Winter & Summer Storms	Education & Awareness Programs	Encourage residents to be aware of and prepared for severe weather and extended power outages.	New High Ongoing	City Admin, City EM	Same as above.	City
3	Severe Summer Storms	Local Planning & Regulations / Structure & Infrastructure Projects	Work with Sibley County to address the need for our 1 mobile home park and municipal campground that do not have storm shelters.	New High TBD	City Admin, City EM	The city will work with Sibley County Emergency Management for assistance in assessing the needs for the MHP and campground and determining next steps. If a tornado safe room is desired the city would seek possible future FEMA grant funding.	City, Other (TBD)
4	Severe Summer Storms	Mitigation Preparedness & Response Support	Maintain the city's outdoor warning siren to ensure its functionality.	Existing High Ongoing	City Admin, City EM	The city employs a company for regular siren maintenance.	City
5	Flooding	Structure & Infrastructure Systems	Continue to improve the city's stormwater system and reduce I&I to reduce basement flooding and property damage.	In-Progress High 2021-2022	City PW	We are currently upgrading our storm sewer lines and we are having a storm water study done. We use cameras in residential sewers to reduce inflow and infiltration.	City

WAC/SAC WAIVER AGREEMENT

THIS AGREEMENT is made and entered into by and between the City of Arlington, Minnesota, a municipal corporation under the laws of Minnesota ("City") and Peka Homes LLC ("Developer").

Address: 237 Frenzel Dr., Arlington **Estimated Value of Property:** \$250,000

WHEREAS, the City of Arlington is currently charging residents building a residential home in Arlington a Water Access Connection (WAC) fee of \$1,325 and Sewer Access Connection (SAC) fee of \$3,500, and

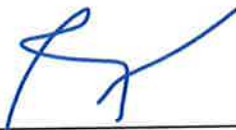
WHEREAS, a recommendation was made to the EDA to consider waiving Water Access Connection (WAC) and Sewer Access Connection (SAC) fees in an attempt to encourage residential growth within the City of Arlington, and

WHEREAS, the applicant have requested that the City waive 100% of the obligation to pay sewer and water connection fees totaling \$4,825, and

WHEREAS, the City of Arlington is willing to waive the WAC and SAC connection fees.

NOW, THEREFORE, on the basis of these covenants herein, the parties hereto agree as follows:

1. Waiving of WAC/SAC connection fees will be approved by the Arlington City Council.
 - A. The City will waive no more than \$4,825 per lot for the combined WAC/SAC connection fees in conjunction with the construction of homes on vacant lots.
 - B. The WAC/SAC connection fee waivers will be issued on a first come, first served basis until funds are extinguished.
2. The Developer must agree to promptly pay all other fees and charges imposed by the City in conjunction with construction of a dwelling on the vacant lot, and shall not otherwise be delinquent on City fees and charges.
3. To be eligible for a WAC/SAC connection fee waiver, developers' must construct a home that will have a market value exceeding \$210,000.
4. Waivers will only be offered for new single family and twin home units.
5. The WAC/SAC connection fee will be waived at the time the permit is issued, and construction must begin within 365 days of receiving a WAC/SAC waiver.
6. Any WAC/SAC connection fee waiver will be documented in a written agreement signed by the City and the developer.

By:  _____
Developer

Its: Owner _____

By: _____
City of Arlington

Its: _____

This document was drafted by:
The City of Arlington
Amy Newsom, EDA Director
204 Shamrock Drive
Arlington, MN 55307
507-964-2378

1/1/2021



Real People. Real Solutions.

1960 Premier Drive
Mankato, MN 56001-5900

Ph: (507) 625-4171
Fax: (507) 625-4177
Bolton-Menk.com

VIA EMAIL

November 4, 2022

Amy Newsom, City Administrator
City of Arlington
204 Shamrock Drive
Arlington, MN 55307

RE: Pay Request No. 7
Water Treatment Facility Rehabilitation
Arlington, Minnesota
Project No.: 0M2.124705

Dear Amy,

Enclosed is a copy of Pay Request No. 7 from Gridor Constr., Inc. for \$344,382.60. I have reviewed this request and recommend payment to the Contractor. The work reflected on this request represents 52.4 percent of the work to be completed under this contract. Please process this request for payment.

If you have any questions, please do not hesitate to contact me.

Sincerely,

BOLTON & MENK, INC.

A handwritten signature in blue ink, appearing to read 'Jake Pichelmann', written over a blue circular stamp.

Jake R. Pichelmann, P.E.
Principal Environmental Engineer

Enclosure

cc: Jason Femrite – Bolton & Menk, Inc.
File

APPLICATION AND CERTIFICATE FOR PAYMENT

TO OWNER:	City of Arlington, MN 101 Henderson RD Arlington, MN 55307	PROJECT:	Water Treatment Plant Renovation	APPLICATION NO.:	7
				PERIOD TO:	10/28/22
				PROJECT NO.:	2021-05
				SUBSTANTIAL CONTRACT DATE:	
				FINAL CONTRACT DATE:	
CONTRACTOR:	Gridor Constr., Inc. 3900 27th Street SE Buffalo, MN 55313	ENGINEER:	Bolton & Monk, Inc. 12224 Nicolett Avenue Burnsville, MN 55337		
CONTACT:	Nate Voegelé	CONTACT:	Jake Picheimann		

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract,

1. ORIGINAL CONTRACT SUM.....		\$1,831,900.00
2. Net change by Change Orders.....		\$0.00
3. CONTRACT SUM TO DATE (Line 1 + Line 2).....		\$1,831,900.00
4. TOTAL COMPLETED & STORED TO DATE.....		\$854,747.00
5. RETAINAGE:		
A. 5% of Completed to Date	\$382,388.00	
B. 5% of Stored Materials	\$472,361.00	
Total Retainage	\$42,737.35	
6. TOTAL EARNED LESS RETAINAGE.....		\$812,009.65
(Line 4 less Line 5 Total)		
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT.....		\$467,827.05
(Line 6 from prior payment)		
8. CURRENT PAYMENT DUE.....		\$344,382.60
9. BALANCE TO FINISH, INCLUDING RETAINAGE.....		\$810,880.35
(Line 3 less Line 8)		

CHANGE ORDER SUMMARY

ADDITIONS

DEDUCTIONS

Total changes approved in previous months by Owner: COs				
Total approved this month:				
NET CHANGES by Change Order:	TOTALS:	\$0.00	\$0.00	\$0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is due.

CONTRACTOR:

By: 

State of Minnesota
Subscribed and sworn to before me this _____ day of _____, 20__

Notary Public

Commission Expiration

ENGINEER'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Engineer certifies to the Owner that to the best of the Engineer's knowledge, information and belief the Work has progressed as indicated, the quality of Work is in accordance with the quality of the Work as in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED: _____

ENGINEER: Bolton & Monk, Inc.

By:  \$344,382.60

OWNER'S ACCEPTANCE/ APPROVAL

OWNER: Arlington, MN

By: _____ Date: _____

Item No.	B Description of Work	C Scheduled Value	D Work Completed		E	F Material Presently Stored (Not in D or E)	G Total Completed and Stored To Date (D+E+F)	H Percent Completed (G/C)	I Balance To Finish (C-G)	
			From Previous Application	This Period						
				Percent						Amount
Division 1										
1000 000	Mobilization Insurance & Bonds	\$13,000	\$13,000				\$13,000	100.0%	\$0	
1010 000	Allowances	\$210,000	\$8,859		\$15,402	\$98,325	\$122,586	58.4%	\$87,414	
Subtotal for	Division 1	\$223,000	\$21,859		\$15,402	\$98,325	\$135,586	60.8%	\$87,414	
			\$21,859			check	\$135,586			
Division 2										
2060 000	Demolition of Existing Facilities	\$55,000	\$13,750	25.00%	\$13,750		\$27,500	50.0%	\$27,500	
2920 000	Turf Restoration	\$3,000					\$0	0.0%	\$3,000	
2080 000	Bypassing	\$4,900	\$3,675				\$3,675	75.0%	\$1,225	
2090 000	Disinfection	\$5,000	\$0,300				\$300	5.0%	\$5,700	
Subtotal for	Division 2	\$68,900	\$17,725.00		\$13,750	\$0	\$31,475	45.68%	\$37,425	
			check	\$17,725		Check	\$31,475			
Division 3										
3300 000	CIP Concrete	\$5,000	\$5,000				\$5,000	100.0%	\$0	
Subtotal for	Division 3	\$5,000	\$5,000.00		\$0	\$0	\$5,000	100.00%	\$0	
			check	\$5,000		Check	\$5,000			
Division 4										
4810 000	Masonry Restoration	\$70,000		75.00%	\$52,500		\$52,500	75.0%	\$17,500	
Subtotal for	Division 4	\$70,000	\$0.00		\$52,500	\$0	\$52,500	75.00%	\$17,500	
			check			Check	\$52,500			
Division 5										
5520 000	Handrails and Railings	\$10,000					\$0	0.0%	\$10,000	
5521 000	Hatches	\$2,000	\$2,000				\$2,000	100.0%	\$0	
Subtotal for	Division 5	\$12,000	\$2,000.00		\$0	\$0	\$2,000	16.67%	\$10,000	
			check	\$2,000		Check	\$2,000			
Division 6										
6100 000	Rough Carpentry	\$2,000	\$1,000				\$1,000	50.0%	\$1,000	
6200 000	Finish Carpentry	\$2,000					\$0	0.0%	\$2,000	

Item No.	B Description of Work	C Scheduled Value	D Work Completed		E Amount	F Material Presently Stored (Not in D or E)	G Total Completed and Stored To Date (D+E+F)	H Percent Completed (G/C)	I Balance To Finish (C-G)	
			From Previous Application	This Period						
				Percent						Amount
Subtotal for	Division 6	\$4,000	\$1,000.00		\$0	\$0	\$1,000	25.00%	\$3,000	
		check	\$1,000			Check	\$1,000			
Division 7										
7900 000	Caulking & Sealants	\$5,000		25.00%	\$1,250		\$1,250	25.0%	\$3,750	
7901 000	Sheet Metal	\$7,000					\$0	0.0%	\$7,000	
Subtotal for	Division 7	\$12,000	\$0.00		\$1,250	\$0	\$1,250	10.42%	\$10,750	
		check				Check	\$1,250			
Division 8										
8110 000	Doors and Frames	\$38,000				\$29,701	\$29,701	78.2%	\$8,299	
8220 000	FRP Doors and Frames	\$6,000				\$4,000	\$4,000	66.7%	\$2,000	
8360 000	Windows	\$10,000				\$0	\$0	0.0%	\$10,000	
8900 000	Insulated Translucent Panel System	\$10,000				\$6,296	\$6,296	63.0%	\$3,704	
Subtotal for	Division 8	\$64,000	\$0.00		\$0	\$39,997	\$39,997	62.50%	\$24,003	
		check				Check	\$39,997			
Division 9										
9900 000	Water Treatment Facility Painting	\$130,000	\$46,800	20.00%	\$26,000		\$72,800	56.0%	\$57,200	
Subtotal for	Division 9	\$130,000	\$46,800.00		\$26,000	\$0	\$72,800	56.00%	\$57,200	
		check	\$46,800			Check	\$72,800			
Division 10										
10900 000	Dock Bumpers	\$1,000					\$0	0.0%	\$1,000	
10110 000	Marker Boards	\$1,000					\$0	0.0%	\$1,000	
10400 000	Signage	\$1,000					\$0	0.0%	\$1,000	
Subtotal for	Division 10	\$3,000	\$0.00		\$0	\$0	\$0	0.00%	\$3,000	
		check				Check	\$0			
Division 11										
11220 000	Air Wash Blowers (Positive Displacement)	\$25,000					\$0	0.0%	\$25,000	
11230 000	Water Aeration Equipment	\$65,000	\$35,000			\$30,000	\$65,000	100.0%	\$0	
11240 000	Chemical Feed Systems - Sections 11240 to 11260	\$10,000					\$0	0.0%	\$10,000	

Item No.	B Description of Work	C Scheduled Value	D Work Completed		E Amount	F Material Presently Stored (Not in D or E)	G Total Completed and Stored To Date (D+E+F)	H Percent Completed (G/C)	I Balance To Finish (C-G)	
			From Previous Application	This Period						
				Percent						Amount
11311.000	Submersible Centrifugal Pumps	\$50,000								
Subtotal for	Division 11	\$150,000	\$35,000.00		\$0	\$30,000	\$65,000	43.33%	\$85,000	
	check		\$35,000							
Division 13										
13225.000	Filter Renovation	\$150,000	\$60,000	5.00%	\$7,500	\$72,648	\$140,148	93.4%	\$9,852	
Subtotal for	Division 13	\$150,000	\$60,000.00		\$7,500	\$72,648	\$140,148	93.43%	\$9,852	
	check		\$60,000			Check	\$140,148			
Division 14										
Subtotal for	Division 14	\$0	\$0.00		\$0	\$0	\$0	0.00%	\$0	
	check									
Division 15										
15060.000	Process Pipe & Pipe Fittings	\$20,000					\$0	0.0%	\$20,000	
15060.001	Misc. Process Pipe & Valves	\$40,000	\$6,000	15.00%	\$6,000		\$12,000	30.0%	\$28,000	
15100.000	Valves	\$220,000		3.00%	\$6,600	\$208,406	\$215,006	97.7%	\$4,994	
	HVAC Subcontract									
15000.000	General Provisions (HVAC)	\$15,000					\$0	0.0%	\$0	
15540.000	Unit Heaters	\$13,000					\$0	0.0%	\$13,000	
15721.000	MAU	\$30,000					\$0	0.0%	\$30,000	
15821.000	Dehumidifiers	\$23,000					\$0	0.0%	\$23,000	
15870.000	Exhaust Fans	\$11,000					\$0	0.0%	\$11,000	
15910.000	Ductwork/Accessories	\$123,000					\$0	0.0%	\$123,000	
15950.000	Temp Controls	\$33,000					\$0	0.0%	\$33,000	
15990.000	Test and Balance	\$2,000					\$0	0.0%	\$2,000	
15480.000	Compressor System	\$10,000					\$0	0.0%	\$10,000	
Subtotal for	Division 15	\$540,000	\$6,000.00		\$12,600	\$217,391	\$235,991	43.70%	\$304,009	
	check		\$6,000			Check	\$235,991			
Division 16										
16050.000	General Conditions	\$24,000	\$2,400	13.33%	\$3,200		\$5,600	23.3%	\$18,400	
16050.001	Branch Power M&L	\$8,000		60.00%	\$4,800		\$4,800	60.0%	\$3,200	

Item No.	Description of Work	C Scheduled Value	D Work Completed		E	F Material Presently Stored (Not in D or E)	G Total Completed and Stored To Date (D+E+F)	H Percent Completed (G/C)	I Balance To Finish (C-G)	
			From Previous Application	This Period						
				Percent						Amount
16500 000	Lighting and Electric Heaters	\$14,000				\$14,000	\$14,000	100.0%	\$0	
16901 000	Measuring and Control Instruments	\$60,000	\$5,800	9.67%	\$5,800		\$11,800	19.3%	\$48,400	
16950 000	Supervisory Controls	\$84,000	\$36,000				\$36,000	38.3%	\$58,000	
Subtotal for	Division 16	\$200,000	\$44,200.00		\$13,800	\$14,000	\$72,000	36.00%	\$128,000	
		check	\$44,200			Check	\$72,000			
					219706 25					
Grand Total		\$1,631,900	\$239,584		\$142,802	\$472,361	854,747	52.38%	\$777,153 1631900	

Stored Materials & Equipment Summary

Gridor Conatr, Inc.
3990 27th Street SE
Buffalo, MN 55313



Pay Req. No. 6
Period Ending: 9/26/2022

Pay Item No.	Pay Application Work Item	Scheduled Value	Previous Stored To Date	New Storage This Month	Vendor/Description for New Storage	Total Stored to Date	Previous Installed to date	Installed this month	Total installed to date	Amount Remaining in Storage
Grand Totals		\$1,831,900								
1000 000	Mobilization Insurance & Bonds	\$13,000								
1010 000	Allowances	\$210,000	\$98,325			\$98,325				\$98,325
Subtotal for	Division 1	\$223,000	\$98,325	\$0		\$98,325	\$0	\$0	\$0	\$98,325
Division 2										
2050 000	Demolition of Existing Facilities	\$55,000								
2020 000	Turf Restoration	\$3,000								
2080 000	Bypassing	\$4,900								
Subtotal for	Division 2	\$68,900	\$0	\$0		\$0	\$0	\$0	\$0	\$0
Division 3										
3300 000	CIP Concrete	\$5,000								
Subtotal for	Division 3	\$5,000	\$0	\$0		\$0	\$0	\$0	\$0	\$0
Division 4										
4610 000	Masonry Restoration	\$70,000								
Subtotal for	Division 4	\$70,000	\$0	\$0		\$0	\$0	\$0	\$0	\$0
Division 5										
5520 000	Handrails and Railings	\$10,000								
5521 000	Hatches	\$2,000								
Subtotal for	Division 5	\$12,000	\$0	\$0		\$0	\$0	\$0	\$0	\$0
Division 6										
6100 000	Rough Carpentry	\$1,000								
6200 000	Finish Carpentry	\$3,000								
Subtotal for	Division 6	\$4,000	\$0	\$0		\$0	\$0	\$0	\$0	\$0
Division 7										
7920 000	Caulking & Sealants	\$5,000								
7901 000	Sheet Metal	\$7,000								
Subtotal for	Division 7	\$12,000	\$0	\$0		\$0	\$0	\$0	\$0	\$0
Division 8										
8110 000	Doors and Frames	\$38,000	\$22,401	\$7,300	David Hardware	\$29,701				\$29,701
8220 000	FRP Doors and Frames	\$5,000		\$4,000	David Hardware	\$4,000				\$4,000
8350 000	Windows	\$10,000								



Pay Req No. 6
 Period Ending: 9/26/2022

Pay Item No.	Pay Application Work Item	Scheduled Value	Previous Stored To Date	New Storage This Month	Vendor/Description for New Storage	Total Stored to Date	Previous Installed to date	Installed this month	Total Installed to date	Amount Remaining in Storage
Division 8										
8900 000	Insulated Translucent Panel System	\$10,000	\$0,296			\$0,296		\$0	\$0	\$0
Subtotal for	Division 8	\$64,000	\$28,697	\$11,300		\$39,997		\$0	\$0	\$39,997
Division 9										
9600 000	Water Treatment Facility Painting	\$130,000		\$0		\$0		\$0	\$0	\$0
Subtotal for	Division 9	\$130,000	\$0	\$0		\$0		\$0	\$0	\$0
Division 10										
10000 000	Deck Bumpers	\$1,000								
10110 000	Marker Boards	\$1,000								
10400 000	Signage	\$1,000								
Subtotal for	Division 10	\$3,000	\$0	\$0		\$0		\$0	\$0	\$0
Division 11										
11220 000	Air Wash Blowers (Positive Displacement)	\$25,000				\$30,000				\$30,000
11230 000	Water Aeration Equipment	\$65,000	\$30,000							
11240 000	Chemical Feed Systems - Sections 11240 to 11260	\$10,000								
11311 000	Submersible Centrifugal Pumps	\$50,000				\$30,000	\$0	\$0	\$0	\$30,000
Subtotal for	Division 11	\$150,000	\$30,000	\$0		\$30,000	\$0	\$0	\$0	\$30,000
Division 13										
13225 000	Filter Renovation	\$150,000	\$72,648			\$72,648		\$0	\$0	\$72,648
Subtotal for	Division 13	\$150,000	\$72,648	\$0		\$72,648		\$0	\$0	\$72,648
Division 14										
Subtotal for	Division 14	\$0	\$0	\$0		\$0		\$0	\$0	\$0
Division 15										
15000 000	Process Pipe & Pipe Fittings	\$20,000								\$208,408
15060 001	Misc. Process Pipe & Valves	\$40,000								
15100 000	Valves	\$220,000		\$208,408		\$208,408				
HVAC Subcontract										
15000 000	General Provisions (HVAC)	\$15,000								
15540 000	Unit Heaters	\$13,000								
15721 000	MAU	\$32,000								
15621 000	Dehumidifiers	\$23,000								
15870 000	Exhaust Fans	\$11,000								
15910 000	Ductwork Accessories	\$123,000								
15950 000	Temp Controls	\$33,000								



Pay Req. No. 6
 Period Ending: 9/26/2022

Pay Item No.	Pay Application Work Item	Scheduled Value	Previous Stored To Date	New Storage This Month	Vendor/Description for New Storage	Total Stored to Date	Previous installed to date	Installed this month	Total installed to date	Amount Remaining in Storage
15900.000	Test and Balance									
15460.000	Compressor System	\$2,000								
	Subtotal for Division 15	\$10,000	\$8,985			\$10,000				\$8,985
		\$540,000	\$8,985	\$208,406		\$217,391	\$0	\$0	\$0	\$217,391
Division 16										
16050.000	General Conditions	\$24,000								
16050.001	Branch Power M&L	\$8,000								
16900.000	Lighting and Electric Heaters	\$14,000	\$14,000							
16901.000	Measuring and Control Instruments	\$80,000				\$14,000				\$14,000
16950.000	Supervisory Controls	\$94,000								
	Subtotal for Division 16	\$200,000	\$0	\$0		\$0	\$0	\$0	\$0	\$0
Grand Totals		\$1,631,900	\$238,655	\$219,706		\$458,361	\$0	\$0	\$0	\$458,361



INVOICE		
DATE	NUMBER	PAGE
8/31/2022	088538	1 of 1

B GRC100
 I GRIDOR CONSTRUCTION
 L 3990 27TH STREET SE
 L BUFFALO, MN 553135045
 T
 O

S GRIDOR CONSTRUCTION
 H C/O WATER TREATMENT PLANT
 I 101 HENDERSON ROAD
 P ARLINGTON, MN 55307
 T
 O

ATTENTION:

SHERI.FULLER@GRIDOR.COM

CUSTOMER REF/PO #	JOB #	JOB TITLE	SLP	SHIPPING TYPE	TERMS
2021-05/15200	0061702	ARLINGTON, MN, VALVES, WATER	CTB/NRS	BEST WAY	NET 30

QUANTITY		PART NO.	DESCRIPTION	UNIT PRICE	EXTENDED
B/O	Shp				
0.00	1		VALVE PACKAGE	\$195,000.00	\$195,000.00



206,156.25
 9750.00 Ret
 198,156.25

Approved *MS*
 For *21-05 15-200*
 Date Paid _____
 Check No _____

<small>This invoice is subject to and incorporates by reference Vessco Holdings's ("Vessco") Terms & Conditions and Customer Warranty available at www.vesscoholdings.com which will be provided by email upon written request. Buyer expressly agrees to the provisions set forth in the Terms & Conditions and Customer Warranty posted on Vessco's website.</small>	SUBTOTAL: \$ 195,000.00 TAX: \$ 13,406.25 TOTAL: \$ 208,406.25
--	---

***TERMS OF PAYMENT ARE NET 30 DAYS FROM DATE OF INVOICE *A 7% PER ANNUM SERVICE CHARGE SHALL BE APPLIED TO ANY BALANCE *CREDIT CARD PAYMENTS ARE SUBJECT TO AN ADDITIONAL 3% CHARGE**

8217 Upland Circle Chanhassen, MN 55317 - Phone: 952-941-2678 - Fax: 952-941-0796

www.Vessco.com

State General Election PAT/Training

- **Canvassing**

- Evening of November 14th through midnight on November 18th
- Procedure in your clerk guide
- Oath, review abstract (from us), sign, return electronic copy to us, permanent retention for you

- **Certificate of Election**

- Issue to those who won the election
- Only after financial report(s) received

From: Joe Morgan
Sent: Wednesday, November 2, 2022 8:15 AM
To: Amy Newsom
Subject: Smell Complaint

Amy, I hope you're feeling a little better today, there seems to be some stuff going around. I know you have just a couple days left before starting your new journey, I am hoping you can pass this on to Shirly and I would like the Odor concern on the next council meetings agenda. I received a call yesterday from a new resident Launa Brouly (probably not spelled right and I am not sure I understood the last name correctly) . I ended up talking with her for over a 1/2 hour about the smell she is living with from Northland Drying. Her complaint was on November 1st and I received the call at 12:55 pm. She noted strong burnt smell, she indicated she had called city office and had spoken with Lisa/possibly Gwen. Through the conversation she noted she wanted to make a formal complaint, she said when she purchased her house this facility was not disclosed to her by the realtor and that she was taking action filing complaints on that. I shared with her that we had a formal form for these and that she should go through city office for them. She asked about online and I responded I didn't think we had them available yet but it might be possible to get them emailed. I stopped by the city office yesterday after work to inquire about Launa's concerns and request to make a formal complaint and shared some of the call I had with Lisa and Gwen. I drove by the area that afternoon and didn't pick up on the smell however this morning at 5:10 am I drove through with just my window down and the burnt smell was very strong. This morning I did some quick research on what a town should do about odor complaints and I came across this CDC assessment on their sight. Also seen some that St Paul has on their website. Could be some talking points for the meeting.

https://www.atsdr.cdc.gov/odors/odor_investigations.html

Odor Investigations | Environmental Odors | ATSDR

The odor detection threshold is the lowest concentration that humans can smell.. The odor recognition threshold is the concentration at which you can identify an odor.. At a given concentration, one person may smell and recognize the odor, while another person may barely notice it. Individuals may also respond differently to the same odor.

www.atsdr.cdc.gov

DRAFT TIMELINE

For the search for a new city administrator City of Arlington, Minnesota

- October 28** Meet with search committee, staff, and city council
- November 1 – November 15** Develop strategy, expectations, position announcement brochure, and other advertising documents
- November 16-17** approval of job expectations and position announcement by city staff and interim city administrator to ok this information. Vote by the council is not required
- November 18** advertise position for thirty days
- November/December** Review application packets as they come in, rate application packets based on set criteria
- December 19** Advertising for the position concludes
- December 20 – January 2** Final application packet review
- January 3 – January 13** Zoom meeting with top candidates, PXT, leadership management assessment, reference checks, background checks
- January 13** Schedule interviews
- January 16** Present top four applicant packets to the Arlington hiring committee
- January 23 and 24** Interviews
- January 23** Most of the day applicants meet/interview with city staff. Public meet and greet with the candidates, 5:00pm–6:30pm
- January 24** City hiring committee interviews candidates/deliberate and make a recommendation to the city council
- January 25 - 27** Negotiate contract
- January 30 or 31** City Council vote on contract and appoint new city administrator
- End of February when available** New Administrator start date

City Administrator salary range:

Populations from 2,000 to 3,000

High of range	\$104,208.00	Pelican Rapids, MN
Average range	\$96,128 .00	14 Various Cities
City of Arlington	\$97,468.00	\$103,396.00

Cities searching for an administrator

79,052.00.00 - \$110,601.00	Rockville, MN 2,398
\$100,000.00 - \$130,000.00	Barnesville, MN 2786
\$68,556.00 - \$89,232.00	Harmony, MN 1026

Suggested range **\$ 96,500 - \$105,500.00**

Salary Survey data: Bakertilly, LMC, AMC, Metro Cities 2022

October 13, 2022

Mayor Richard Nagel
City of Arlington
204 Shamrock Drive
Arlington, MN 55307-9551

Dear Mayor Nagel,

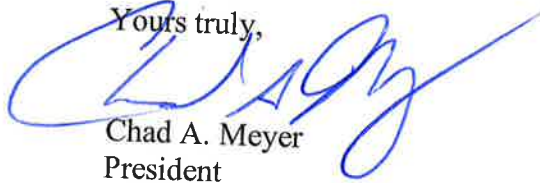
Pursuant Paragraphs 1.4, 4.2 and 4.4 of the Operations and Maintenance Agreement dated November 7, 2019 between the City of Arlington, Minnesota and PeopleService, Inc., the maximum annual maintenance/repair (non-capital) expenditure amount, monthly compensation and the chemical "base amount" the City of Arlington, Minnesota pays for our services are to be adjusted each January 1st. This adjustment is to be based on the change in the Consumer Price Index for All Urban Consumers (CPI-U) between September of 2021 and September of 2022 plus one percent (1%).

The change to the CPI-U was a positive 8.2%, making the total adjustment 9.2%. Thus, effective January 1, 2023, the City of Arlington's maximum annual maintenance/repair (non-capital) expenditure amount will be increased from \$20,627 to \$22,525, the monthly compensation will be increased from \$22,885 to \$24,990 and the chemical "base amount" will be increased from \$12,853 to \$14,035. Enclosed you will find a ten-year CPI summary showing that the annual average increase over that time period has been 2.6%. This year is obviously higher than what anyone had anticipated. When included in the ten-year average the annual increase remains at a reasonable rate. If the high inflation still exists in September of 2023 we will review our options at that time.

PeopleService would appreciate your signing this letter in the space provided below, and returning a copy to our office there in Arlington. By doing so, you acknowledge receipt of this letter and the adjustment and increase in accordance with the Operations and Maintenance Agreement. Please note that the CPI adjustment will be billed beginning with the effective date even if we do not receive a signed copy of this letter.

If you have any questions, please don't hesitate to contact either Greg Stang, our Region Manager for your area, or myself.

Yours truly,



Chad A. Meyer
President

Acknowledged:
CITY OF ARLINGTON, MINNESOTA

By: _____
Mayor

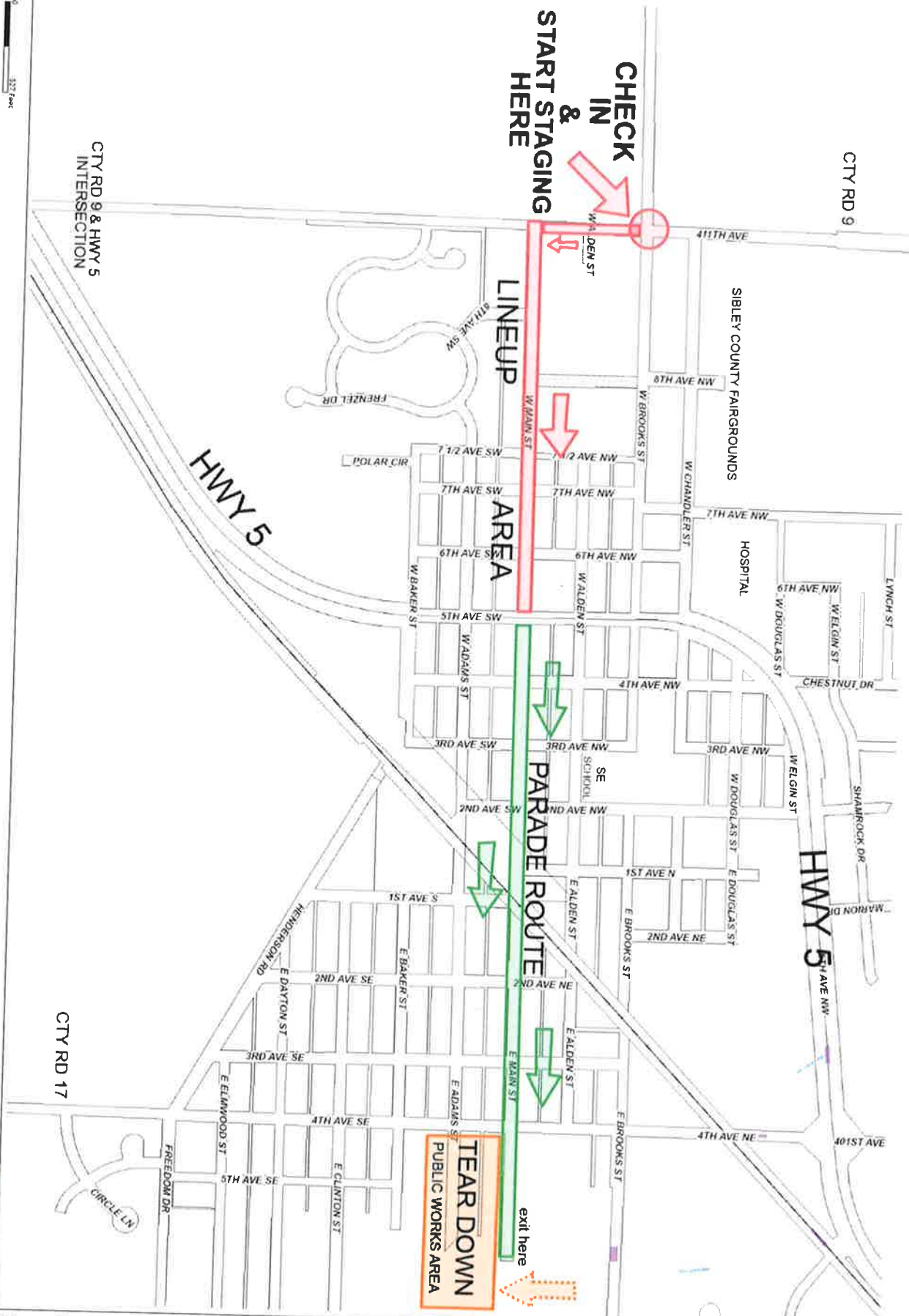
Dated: _____

PeopleService INC.

Water & Wastewater Professionals

10 Year CPI Summary

Year	Annual % Increase
Sep-13	1.2%
Sep-14	1.7%
Sep-15	0.0%
Sep-16	1.5%
Sep-17	2.2%
Sep-18	2.3%
Sep-19	1.7%
Sep-20	1.4%
Sep-21	5.4%
Sep-22	8.2%
Average	2.6%



CTY RD 9 & HWY 5 INTERSECTION

HWY 5

CTY RD 17

322 Feet

Bolton & Menk, Inc. - Web GIS 9/15/2013 3:02 PM



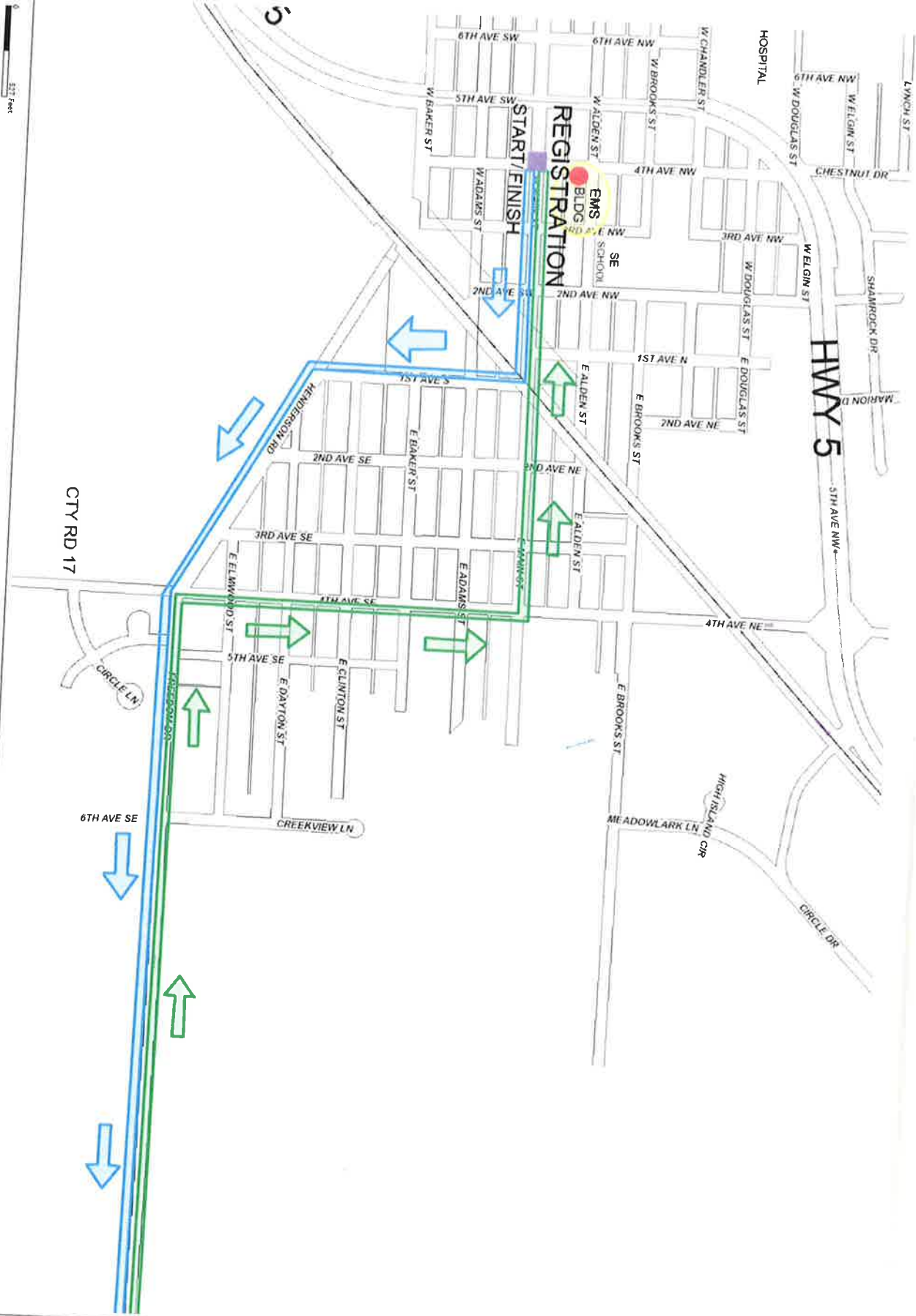
- Legend**
- Right-of-Way
 - - - Right of Way - Vacated
 - Railroad
 - Bridges
 - Protected Waters - Basin
 - Public Water Element
 - Public Water Element
 - Protected Waters - Watercourse

Arti-Dazzle Parade Route (Handout) 2022



Map content is subject to change without notice. The City of Arlington is not responsible for any errors or omissions in this map. The City of Arlington is not responsible for any damages or liabilities arising from the use of this map. The City of Arlington is not responsible for any damages or liabilities arising from the use of this map.

527 Feet



- Legend**
- Right-of-Way
 - Right of Way - Vacated
 - Railroad
 - Bridges
 - Protected Waters - Basin
 - Public Water Basin
 - Public Water Wetland
 - Protected Waters - Watercourse

**Art-I-DASH
5K Walk/Run
2022**



Disclaimer:
This product is neither a right nor liability for a specific event. It is intended to provide a general overview of the route. The route is subject to change without notice. The route is not intended to be used as a legal document. The route is not intended to be used as a legal document. The route is not intended to be used as a legal document.