

Lawrence County

Natural Hazard Mitigation Plan



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TABLE OF CONTENTS

I. Introduction	
Introduction.....	2
What is Hazard Mitigation.....	2
Purpose, Plan Use, Scope, Goals.....	4
County Profile.....	4
II. Prerequisites	
Multi-Jurisdictional Participation and Adoption	6
Adoption by Local Governing Body	7
III. Planning Process	
Documentation of the Planning Process.....	7
Selection of a Planning Team.....	9
Public Involvement	11
Technical Review of Documents.....	13
Review of 2019 Plan.....	15
IV. Risk Assessment	
Identifying Hazards.....	15
Natural Hazards in the Plan Jurisdiction.....	16
Hazard Profile.....	18
Dam Failure.....	19
Drought.....	22
Extreme Temperatures.....	24
Flood.....	27
Geological.....	31
High/Severe Wind.....	35
Summer Storms.....	36
Tornados.....	39
Wildfires.....	40
Winter Storms.....	46
Vulnerable Populations.....	48
Assessing Vulnerability: Overview.....	49
Addressing Repetitive Loss Properties.....	53
Identifying Structures.....	53
Estimating Potential Losses.....	61
Analyzing Development Trends.....	63
Unique or Varied Risk Assessment.....	64
V. Mitigation Strategy	
Mitigation Requirements and Overview.....	84
Identification and Analysis of Mitigation Actions.....	87
Prioritization of Mitigation Activities.....	102
Implementation of Mitigation Actions	102
VI. Plan Maintenance Process	
Monitoring, Evaluating, and Updating the Plan.....	104
Incorporation into Existing Planning Mechanisms.....	105
Continued Public Involvement.....	108
Sources.....	110
Appendix A: Meeting Documentation	
Appendix B: Weather Event History	
Appendix C: Public Comments; Survey; Emails to EM	
Appendix D: Hazard Definitions	
Appendix E: Mitigation Goals and Actions Update from 2018	
Appendix F: Adoption Resolutions	

I. INTRODUCTION

Changes/Revisions to Introduction: The plan format was redone.

Lawrence County is susceptible to natural hazards that threaten the health and welfare of its citizens. In the past natural hazards have inflicted costly damage throughout the county. While disasters cannot always be prevented, the cost of response and recovery from potential disasters can be substantially reduced when attention is turned to mitigating their impacts before they occur. This Plan serves as a multi-jurisdictional plan including Central City, Deadwood, Lead, Spearfish, and Whitewood.

WHAT IS HAZARD MITIGATION?

Hazard mitigation is defined as any cost-effective action(s) that reduces or prevents vulnerability of people, property, and infrastructure in regard to identified hazards and their associated risks. Hazard mitigation measures must be practical, cost-effective, and environmentally and politically acceptable. Actions taken to limit the vulnerability of society to hazards must not in themselves be more costly than the value of anticipated damages. Hazard mitigation measures fall into three categories: Keep the hazard away from people, property, and structures; keep people, property, and structures away from the hazard and reduce the impact of the hazard on the victims.

Mitigation actions should be incorporated into the activities associated with comprehensive and capital improvement planning with consideration given to areas with the greatest vulnerability to natural hazards. Capital investments, whether for homes, roads, public utilities, pipelines, power plants, or public works, determine to a large extent the nature and degree of hazard vulnerability to a community. Once a capital facility is in place, it becomes more difficult to correct any errors in location or construction with respect to hazard vulnerability. For these reasons zoning, building codes, and other ordinances that manage development in high-vulnerability areas ensure new buildings and infrastructure are built to avoid or withstand the damaging forces of hazards. These actions are useful mitigation approaches local governments can implement.

Historically, city and county mitigation measures have been the most neglected programs within emergency management and planning departments. Since the priority to implement mitigation activities is generally low in comparison to the perceived threat, some important mitigation measures take time to implement. Mitigation success can be achieved when accurate information is portrayed through complete hazard identification and impact studies and followed by effective mitigation efforts. Hazard mitigation is key in reducing or eliminating risk to people, property, and infrastructure from damage caused by known and/or expected hazards.

This Plan evaluates hazards, risks, and vulnerabilities within the jurisdictional area of the entire county. The Plan supports, aids, identifies, and describes mitigation projects for each of the local jurisdictions participating in the update. The suggested actions and implementation strategies for local governments could reduce the impact of future natural hazard occurrences. Reducing the impact of natural hazards can prevent such occurrences from becoming disastrous but will only be accomplished through a coordinated partnership with emergency managers, political entities, public works officials, planning departments, planning commissions, and other dedicated individuals working to implement the strategies outlined in this plan.

AUTHORITY

In October of 2000, the Disaster Mitigation Act (DMA2K) was signed to amend the 1988 Robert T. Stafford Disaster Relief and Emergency Assistance Act. Section 322 of the Disaster Mitigation Act requires local governments to have a natural hazard mitigation plan in place as a condition of receiving federal disaster mitigation funds. The Plan must:

1. Identify hazards and their associated risks and vulnerabilities.
2. Develop and prioritize mitigation actions; and
3. Encourage cooperation and communication between levels of government and the public.

To be eligible for FEMA's Hazard Mitigation Assistance (HMA) grant programs, the Disaster Mitigation Act of 2000 (DMA 2000) requires local governments to have a FEMA-approved mitigation plan in place. In the mitigation plan, local jurisdictions must demonstrate proposed mitigation projects have a basis in a solid planning process where the unique risks and capabilities of each community are assessed. Mitigation plans must be updated every five years to demonstrate progress has been made toward meeting the community's mitigation goals and ensure the plan continues to be an effective mitigation tool to meet the needs of the county and the communities located within.

PURPOSE

The purpose of the *Lawrence County Natural Hazard Mitigation Plan* is to fulfill federal, state, and local hazard mitigation planning responsibilities consistent with the Federal Emergency Management Agency's guidelines. This Plan will promote mitigation measures; implement short/long range strategies to minimize suffering, loss of life, damage to infrastructure, and property damage; eliminate or minimize conditions that would have an undesirable impact on the citizens, economy, environment, and the well-being of the county. This Plan will educate and facilitate communication with the public, build public and political support for mitigation activities, and develop implementation and planning requirements for hazard mitigation projects.

PLAN USE

This *Lawrence County Natural Hazard Mitigation Plan* should be used to help local elected and appointed officials plan, design, and implement policies, programs, and projects to help reduce their community's vulnerability to natural hazards. The plan should also be used to facilitate inter-jurisdictional coordination and collaboration related to natural hazard mitigation planning and implementation. Formal adoption of the updates to the plan will keep the County and its communities in compliance with the Disaster Mitigation Act of 2000.

Scope

- Provide opportunities for public input and encourage participation and involvement regarding the mitigation plan.
- Identify hazards and vulnerabilities within the county and local jurisdictions.
- Combine risk assessments with public and emergency management ideas.
- Develop goals based on the identified hazards and risks.
- Review existing mitigation measures for gaps and establish projects to sufficiently fulfill the goals.
- Prioritize and evaluate each strategy/objective.
- Review other technical documents and planning processes for cohesion and incorporation with mitigation planning.
- Establish guidelines for updating and monitoring the Plan.
- Present the Plan to Lawrence County and the participating jurisdictions for adoption.

Local Goals

- Protection of life to the extent possible through mitigation planning efforts.
- Protection of critical facilities and public infrastructure to the extent possible through mitigation planning efforts.
- Protection of private property to the extent possible through mitigation planning efforts.
- Promote continuity among all levels of government (federal, state, county, city) by connecting mitigation planning efforts to existing local planning activities.
- Protection of the economy, businesses, industry, education opportunities, and the cultural fabric of a community to the extent possible through mitigation planning efforts.
- Protection of natural resources and the environment, to the extent possible through mitigation planning efforts.

Goals of Mitigation Programs as Established by FEMA

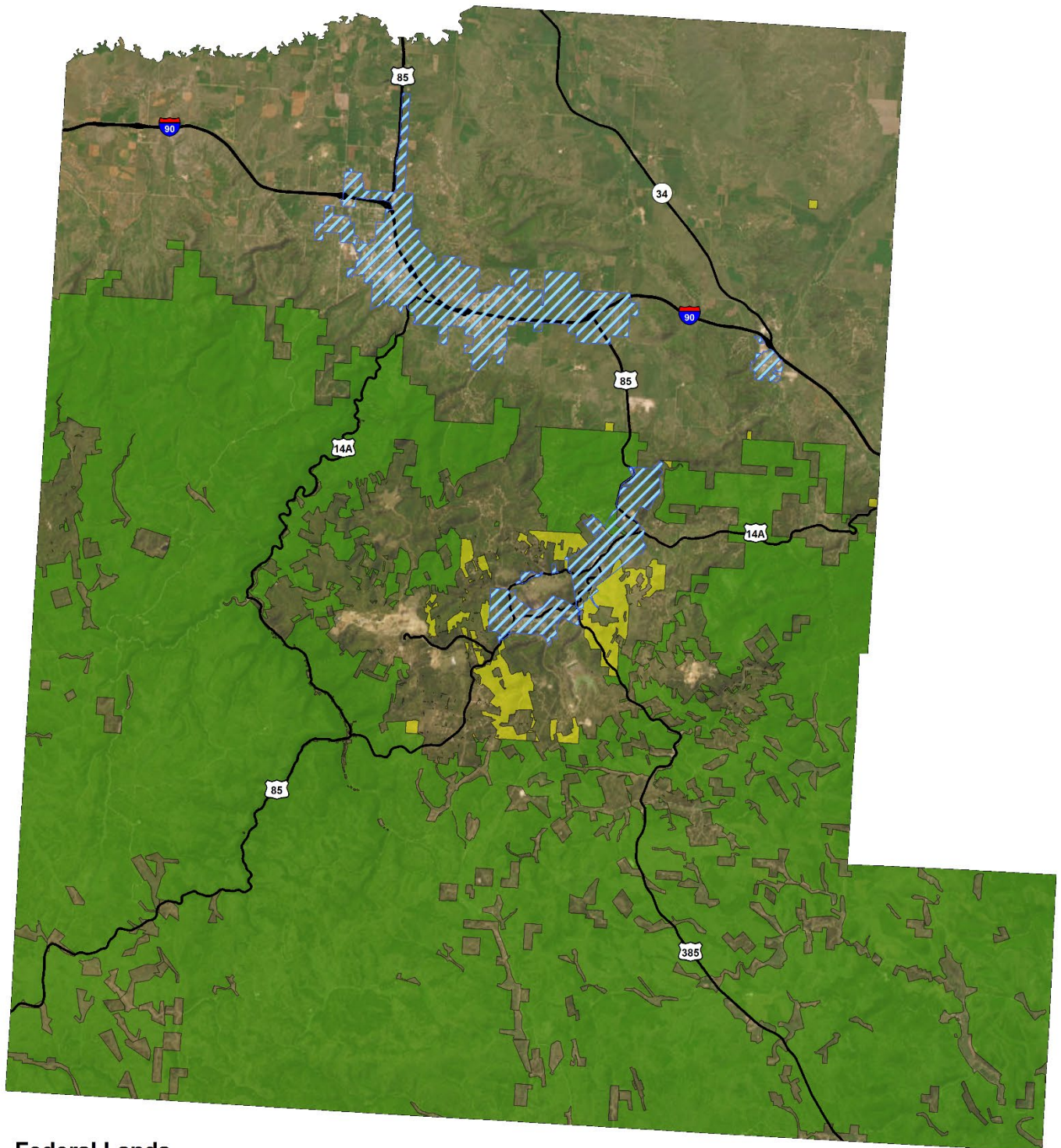
- Eliminate or reduce the long-term risk to human life and property from identified natural and man-made hazards.
- Aid both the private and public sectors in understanding the risks they may be exposed to and exploring mitigation strategies to reduce those risks.
- Avoid risk of exposure to identified hazards.
- Minimize the impacts of those risks when they cannot be avoided.
- Mitigate the impacts of damage as a result of identified hazards.
- Accomplish mitigation strategies in such a way that negative environmental impacts are minimized.
- Provide a basis for funding projects outlined as hazard mitigation strategies.
- Establish a regional platform to enable the community to take advantage of shared goals, resources, and the availability of outside resources.

COUNTY PROFILE

Lawrence County Quick Facts		
Bordering Counties Butte County, SD Meade County, SD Pennington County, SD Weston County, WY Crook County, WY	Cities/Population (2020) Central City 93 Deadwood 1,156 Lead 2,982 Spearfish 12,193 Whitewood 879	Townships & Unorganized Territories St. Onge Township
Lawrence County Population 25,768	Land Cover Forest 68.1% Grasslands 17.0% Shrubland 8.3% Mixed Cropland 2.9% Water 0.1% Urban 2.7% Other 0.9%	Major Transportation Routes Interstate 90 U.S Highway 14 U.S Highway 14A U.S. Highway 85 U.S. Highway 385 SD Highway 34
Land Ownership Private Lands 44.5% Federal Lands 54.6% State Lands 0.9%		
Geographic Area 511,855 acres		
Geology Mesozoic Formation Upper Cretaceous Sandstone Clay Shale & Chalk Lower Cretaceous Limestone Shale Sandstone Jurassic & Triassic Shale Sandstone Mesozoic & Precambrian Formations Slate Quartzite Granite Rhyolite Phonolite	Soils 18% of county: Well drained to excessively drained, very steep. Loamy, silt, and clayey. 3% of county: Well drained, nearly level soils. Loamy or silty and deep. 3% of county: Well drained, gently sloping to very steep soils. Clayey and shallow deep over shale. 76% of county: Well drained and somewhat excessively drained, gently sloping to very steep soils in Black Hills. Loamy to silty, dominantly deep over limestone, sandstone and schist.	
	Precipitation Average Rainfall 22" Spearfish 30" Lead 29" Deadwood Average Snowfall 62" Spearfish 200" Lead 100" Deadwood	Watersheds (HU8 Class) Redwater Watershed Lower Belle Fourche Watershed Rapid Watershed Middle Cheyenne-Elk Watershed
		Utilities Williston Basin Pipeline Butte Electric Black Hills Electric

Table 1.1 Geographic quick facts of Lawrence County, South Dakota.

Lawrence County



Federal Lands

-  Bureau of Land Management
-  Fish and Wildlife Service
-  Forest Service
-  Municipalities
-  Highways

Figure 1.2 Lawrence County Land Ownership

II. PREREQUISITES

Changes/Revisions to Planning Process: The planning team was formed with at least one representative from each adopting jurisdiction. BHCLG and Lawrence County Emergency Manager also met with each adopting body's elected officials to discuss the Plan update.

MULTI-JURISDICTIONAL PLANNING PARTICIPATION AND ADOPTION

This multi-jurisdictional plan serves the entire geographical area within the boundaries of Lawrence County, South Dakota. All municipalities in the county elected to participate in the planning process and the update of the Plan. The participating local jurisdictions include the following: Central City, Deadwood, Lead, Spearfish, and Whitewood.

The *Lawrence County Natural Hazard Mitigation Plan (2025)* was adopted by resolution by the participating incorporated municipalities and the Lawrence County Commission. The Resolutions of Adoption are included as supporting documentation for the Plan.

Dates of Plan Adoption by Jurisdiction	
Jurisdiction	Date of Adoption
Lawrence County	xx/xx/xx
Central City	xx/xx/xx
Deadwood	xx/xx/xx
Lead	Xx/xx/xx
Spearfish	Xx/xx/xx
Whitewood	Xx/xx/xx

Table 2.1. Participating jurisdictions' date of Lawrence County Hazard Plan adoption date.

All participating jurisdictions involved in the Plan updated their information, provided feedback on new developments, and any changes since the last update. Local jurisdictions have also presented the Resolution of Adoption to their councils and passed the resolutions upon FEMA approval of the Plan. The resolutions are included in Appendix I. Table 2.2 shows the "participation" of jurisdictions that intended to adopt the Plan.

Participation of Local Jurisdictions						
Nature of Participation	Lawrence	Central City	Deadwood	Lead	Spearfish	Whitewood
Attended Meetings or work sessions (a minimum of 2 meetings will be considered satisfactory).	☒	☒	☒	☒	☒	☒
Provided inventory and summary of reports and plans relevant to hazard mitigation.	☒	☒	☒	☒	☒	☒
Provided Risk Assessment	☒	☒	☒	☒	☒	☒
Provided descriptions of what is at risk (including local critical facilities and infrastructure at risk from specific Hazards)	☒	☒	☒	☒	☒	☒
Submitted a description or map of local land-use patterns (current and proposed/expected).	☒	☒	☒	☒	☒	☒
Developed goals for the community.	☒	☒	☒	☒	☒	☒
Developed mitigation actions with an analysis/explanation of why those actions were selected.	☒	☒	☒	☒	☒	☒
Prioritized actions emphasizing relative cost-effectiveness.	☒	☒	☒	☒	☒	☒
Reviewed and commented on draft Plan.	☒	☒	☒	☒	☒	☒
Hosted opportunities for public involvement (allowed time for public comment at a city council meeting during public comment period)	☒	☒	☒	☒	☒	☒

Table 2.2. Local jurisdictions participation requirements met. At least seven of the participation requirements must be met for the jurisdiction to have participated in the adoption of Plan.

ADOPTION BY THE LOCAL GOVERNING BODY

Requirement 201.6(c)(5)...For multi-jurisdiction plans, has the governing body of each jurisdiction officially adopted the plan to be eligible for certain FEMA assistance?

F2-a. To receive approval, the participants must adopt the plan and provide documentation that the adoption has occurred.

The local governing body that oversees the update of the *Lawrence County Natural Hazard Mitigation Plan* is the Lawrence County Commission. The Commission has tasked the Lawrence County Emergency Manager with the responsibility of ensuring the Plan is compliant with Federal Emergency Management Agency (FEMA) Guidelines and corresponding regulations.

III. PLANNING PROCESS

Changes/Revisions to Planning Process: The planning process for this update focused on ensuring participation and involvement from all adopting jurisdictions, state, and federal agencies. BHCLG and County Emergency Manager met with all adopting bodies commissions/boards and councils.

DOCUMENTATION OF THE PLANNING PROCESS

Requirement 201.6(c)(1)... Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction.

A1-a. The plan must describe the current planning process.

A1-b. The plan must list the representatives from each of the participants in the current plan that will seek approval and how they participated in the planning process.

Meeting Summaries		
Date	Location	Summary
10/16/2023	Lead City Hall Lead, SD	BHCLG worked with the Lead Comprehensive Planning Commission, Deadwood-Lead Economic Development, and Lead Economic Development Chamber representatives to discuss economic vulnerabilities as part of the Lead Comprehensive Plan Update and Lawrence County Mitigation Plan.
10/19/2023	Lead City Hall Lead, SD	BHCLG worked with the Lead Comprehensive Planning Commission during their regularly scheduled meeting to work on the Comprehensive Plan Update.
10/26/2023	Cheyenne Crossing Spearfish, SD	BGCLH presented at the Lawrence County LEPC meeting. The content of this meeting was to inform LEPC members about the required update and planning process. Adopting members in attendance: Lawrence County, Lead, and Deadwood.
11/06/2023	Whitewood City Hall Whitewood, SD	BHCLG met with Whitewood during their regularly scheduled city council meeting. BHCLG informed the public and council members about the required update and planning process. Whitewood selected planning team representatives to serve as the primary point of contact and planning team member for the Plan update.
11/14/2023	Lawrence County Admin Office, Deadwood, SD	BHCLG and the Lawrence County EM met with Lawrence County during the regularly scheduled commission meeting. The content of this meeting was to inform the public and county commissioners about the required update and planning process. At this time, the county commissioners also approved the contract for Black Hills Council of Local Governments (BHCLG) to complete the update of this Plan. The County also selected members to serve as the point of contact and planning team member for BHCLG, to assist in the Plan update.
11/14/2023	Central City Town Hall, Central City, SD	BHCLG met with Central City during their regularly scheduled town board meeting. BHCLG informed the public and town board members about the required update and planning process. Central City selected planning team

		representatives to serve as the primary point of contact and planning team member for the Plan update.
11/16/2023	Lead City Hall Lead, SD	BHCLG worked with the Lead Comprehensive Planning Commission during their regularly scheduled meeting to work on the Comprehensive Plan Update.
12/04/2023	Spearfish City Hall, Spearfish, SD	BHCLG met with Spearfish during their regularly scheduled city council meeting. BHCLG informed the public and council members about the required update and planning process. Spearfish selected planning team representatives to serve as the primary point of contact and planning team member for the Plan update.
12/18/2023	Lead City Hall Lead, SD	BHCLG met with Lead during their regularly scheduled city commission meeting. BHCLG informed the public and commission members about the required update and planning process. Lead selected planning team representatives to serve as the primary point of contact and planning team member for the Plan update.
12/18/2023	Deadwood City Hall Deadwood, SD	BHCLG met with Deadwood during their regularly scheduled city commission meeting. BHCLG informed the public and commission members about the required update and planning process. Deadwood selected planning team representatives to serve as the primary point of contact and planning team member for the Plan update.
01/18/2024	Lead City Hall, Lead, SD	BHCLG worked with the Lead to update their future land use map as part of the Comprehensive Plan update. Discussions were had on considering areas susceptible to natural hazards.
01/18/2024	Spearfish Holiday Inn, Spearfish, SD	Lawrence County Emergency Manager provided an update on the Lawrence County Natural Hazard Mitigation Plan to the County's LEPC. City in attendance: Deadwood . Additional community lifeline representatives were also in attendance. A complete list can be found in Appendix A.
02/09/2024	Roundhouse Lead, SD	The Mitigation Planning Team had their first meeting to discuss hazard and risk in Lawrence County. The planning team was asked to work on Mitigation Packet to provide information needed for the plan update. The team was also given a draft of the public survey and asked to provide comments. In attendance: Lawrence County, Central City, Deadwood, Lead, Spearfish, and Whitewood .
03/21/2024	Lead City Hall, Lead, SD	BHCLG worked with the Lead to update their Comprehensive Plan update. Discussions were had on considering areas susceptible to natural hazards.
03/21/2024	Lead City Hall, Lead, SD	Lead and Central City met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Lead. During the discussions Lead updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.
03/25/2024	Spearfish City Hall, Spearfish, SD	Spearfish met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Spearfish. During the discussions Spearfish updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.
04/10/2024	Spearfish City Hall, Spearfish, SD	Spearfish met again with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Spearfish. During the discussions Spearfish updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.
04/19/2024	Deadwood City Hall, Deadwood, SD	Deadwood met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Deadwood. During the discussions Deadwood updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.

05/14/2024	Whitewood VDF, Whitewood, SD	Lawrence County EM and BHCLG spoke with local fire groups to discuss wildfire risk in Lawrence County. As part of this meeting fire groups were asked to identify high risk areas.
06/24/2024	Spearfish Canyon FPDB &VFD	Lawrence County EM met with Spearfish Canyon Fire Protection District Board and the VFD to discuss the mitigation plan update and discuss wildfire risks in the area.
06/28/2024	Spearfish City Hall, Spearfish, SD	Lawrence County and BHCLG held a community meeting open to the public to discuss mitigation risks, vulnerabilities, and mitigation actions in Lawrence County. Adopting members in attendance: Lawrence County, Spearfish, and Deadwood.
07/22/2024	Whitewood City Hall, Whitewood, SD	Whitewood met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Whitewood. During the discussions Whitewood updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.
09/04/2024	Lawrence County EM Office, Deadwood, SD	Lawrence County met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in the county. During the discussions Lawrence County updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.
11/06/2024	Central City, SD	BCHLG met briefly with Central City representative to discuss drainage hazards in the town and potential mitigation actions.

Table 3.1 Mitigation Meeting dates, location, and summary.

Requirement 201.6(b)(2))... Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development as well as businesses, academia, and other private and non-profit interests to be involved in the planning process

A2-a. The plan must provide documentation of an opportunity for stakeholders to be involved in the current planning process

Representatives were chosen for each jurisdiction to serve as planning team members, Table 3.9. Each member was requested to attend the planning group meetings, review the previous Plan, serve as the point of contact to the city, provide planning documents, studies, ordinances, provide a list of critical facilities and infrastructure, identify risks and vulnerabilities, and update mitigation projects.

Commissioners, board members, and public officials involved in the Plan are listed in Tables 3.2-3.7. Local, state, and federal organizations that helped by providing information are listed in Tables 3.8.

****Note:** commissioners and council members as well as other elected and non-elected officials of the towns and counties change often. The names listed below are the most recent office/position holders.

Lawrence County Commissioners and Public Officials Involved in the Plan	
Paul Thomson	Emergency Manager
Barb Baker	Emergency Management Administrative Assistant
Bob Ewing	Commission Chair
Brandon Flanagan	Commissioner
Eric Jennings	Commissioner
Richard Sleep	Commissioner
Rick Tysdal	Commissioner
Amber Vogt	Planning and Zoning Director
Brenda McGruder	County Auditor
Bruce Outka	Commission Attorney

Table 3.2 Lawrence County officials involved in the Lawrence County Natural Hazard Mitigation Plan Update.

Central City Board Members and Public Officials Involved in the Plan	
Donovan Renner	Trustee
Rocky Mattson	Trustee
Robyn Novotny	Trustee
Shelly Bennett	Finance Officer

Table 3.3 Central City officials involved in the Lawrence County Natural Hazard Mitigation Plan Update.

Deadwood Commission Members and Public Officials Involved in the Plan	
Charlie Struble-Mook	Mayor
Sharon Martinisko	Commissioner
Micheal Johnson	Commissioner
Blake Joseph	Commissioner
Charle Eagleson	Commissioner
David R. Ruth Jr.	Mayor*
Kevin Kuchenbecker	Planning, Zoning, & Historic Preservation Officer
Charles Fetter	Fire Service Technician
Jessicca McKeown	Finance Officer
Cory Shafer	Police Department
Lornie Stalder	Public Works Director
Justin Lux	Parking and Transportation Director
Alex Hamann	Fire Chief*

Table 3.4 Deadwood officials involved in the Lawrence County Natural Hazard Mitigation Plan Update. Former*

Lead Commission Members and Public Officials Involved in the Plan	
Dustin Heupel	Mayor
Kayla Klein	City Commissioner/Lead Comp Plan Commission*
Roger Thomas	City Commission
Rob Carr	City Commission
Al Rohrer	City Commission
Robin Lucero	Lead City Planner*/City Administrator
Dennis Schumacher	Lead Building Inspector
Ron Everett	Mayor*
Gordon Philips	Lead Comprehensive Plan Commission *
Pam Hamilton	Lead Comprehensive Plan Commission*
Deanne Rude	Lead Comprehensive Plan Commission*
Levi Williams	Lead Planning and Zoning Commission*

Table 3.5 Lead officials involved in the Lawrence County Natural Hazard Mitigation Plan Update. Former*

Spearfish Commission Members and Public Officials Involved in the Plan	
John Senden	Mayor
Ana Rath	City Council
Jamie Hafner	City Council
Dean Myers	City Council
Larry Klarenbeek	City Council
Scott Hourigan	City Council
Pamela Jacobs	City Council
Marty Clark	City Council*
Dan Hodge	City Council*
Tyler Ehnes	Parks & Recreation Director
Jaymia Ecker	Assistant Planning Director
Marlo Kapsa	Planning and Zoning Director*
Adam McMahon	Public Works Director
Miles Burtzlaff	Water/Sewer Superintendent
Nick Broyles	Public Works Director*
Abbey Larson	Staff Engineer/Floodplain Administrator
Michelle DeNeui	Finance Officer
Pat Rotert	Public Safety
Ashley McDonald	Attorney*

Table 3.6 Spearfish officials involved in the Lawrence County Natural Hazard Mitigation Plan Update. Former*

Whitewood Commission Members and Public Officials Involved in the Plan	
Mitchell Harmon	Mayor
Shelbi Bulat	City Council
Sara Fitzgerald	City Council
Roxanna L Cooper	City Council
Jerry Davidson	City Council
Jeremy Noren	City Council
Micheal Weyrick	City Council*
Bruce E White	City Council*
Randal Wiege	City Council*
Jim Smit	Building Inspector
DJ Werlinger	Public Works

Table 3.7 Whitewood officials involved in the Lawrence County Natural Hazard Mitigation Plan Update. Former*

Local, State, and Federal Agencies Involved in the Plan
United States Forest Service
South Dakota Wildland Fire
South Dakota Department of Agricultural and Natural Resources – Water Rights Program
South Dakota Department of Agricultural and Natural Resources – Resource Conservation and Forestry
Bureau of Reclamation
Deadwood-Lead Economic Development
National Weather Service
South Dakota Office of Emergency Management Regional Coordinator
Bureau of Reclamation

Table 3.8 Local, State, and Federal Agencies involved in the Lawrence County Natural Hazard Mitigation Plan Update. These agencies were able to provide some information/data towards this update.

Planning Team Representatives	
Lawrence County	Paul Thomson, Emergency Manager
Lawrence County	Barbara Baker, EM Administrative Assistant
Central City	Rocky Mattson, Trustee
Deadwood	Sharon Martinisko, Commissioner
Deadwood	Keven Kuchenbecker, Planning and Zoning
Deadwood	Charles Fetter, Fire Service Technician
Lead	Rob Carr, Commissioner
Lead	Robin Lucero, Planner
Spearfish	John Senden, Mayor
Spearfish	Jaymia Ecker, Planner
Whitewood	Jerry Davidson, Councilman
Whitewood	DJ Werlinger, Public Works
Whitewood	Jim Smit, Building Inspector

Table 3.9 Participating Plan representatives and title.

Requirement 201.6(b)(1)... Does the plan document how the public was involved in the planning process during the drafting state and prior to plan approval?

A3-a. The plan must document how the public had an opportunity to be involved in the current planning process, and what that participation entailed, including how underserved communities and vulnerable populations within the planning area were provided an opportunity to be involved.

The public was provided with several opportunities at county commission and town board meetings to comment during the drafting stage of the Plan update. State law requires that public meetings allow for public comment during the meetings as described in SDCL 1-25-1.

...The public body shall reserve at every regularly scheduled official meeting a period for public comment, limited at the public body's discretion, but not so limited as to provide for no public comment. At a minimum, public comment shall be allowed at regularly scheduled official meetings which are designated as regular meetings by statute, rule, or ordinance.

It was during this legally required public comment period that the public was allowed to provide comments. Mitigation Planning was listed on the required notices for the town board and county commission meetings. Notices for public meetings require a minimum of time, date, and location, and were posted in accordance with SDCL 1-25.1.1:

...Each political subdivision shall provide public notice, with proposed agenda, that is visible, readable, and accessible for at least an entire, continuous twenty-four hours immediately preceding any official meeting, by posting a copy of the notice, visible to the public, at the principal office of the political subdivision holding the meeting. The proposed agenda shall include the date, time, and location of the meeting. The notice shall also be posted on the political subdivision's website upon dissemination of the notice if a website exists. For any special or rescheduled meeting, the information in the notice shall be delivered in person, by mail, by email, or by telephone, to members of the local news media who have requested notice. For any special or rescheduled meeting, each political subdivision shall also comply with the public notice provisions of this section for a regular meeting to the extent that circumstances permit.

No public comments were made during the Plan update meetings; however, discussion took place among the council members, engineers, finance officers, city engineers and/or attorneys (when relevant), fire specialists and city staff. Meeting minutes were collected for each local jurisdiction and published in the paper or record for each entity as required by law.

From July 9, 2024, to July 21, 2024, the Lawrence County Natural Hazard Mitigation Plan Survey was made available to the public. A link to the survey was provided to the planning team to help spread the word through social media. The survey link was also posted on the County's Facebook page. The online survey version met 508 compliance and WCAG2 as an accessible theme. The theme allows technological information to be accessible to people with disabilities, such as those that may require a screen reader, screen magnifiers, text-to-speech system, and/or voice recognition software. Paper copies of the survey were also provided to the county and cities to post at the city offices. During the stakeholders' meeting, the survey was also advertised during this meeting to encourage attendees to participate and spread the word, those who signed up were also emailed a link to the survey. A total

of 144 surveys were received and the information gathered was implemented into the plan. A summary of the survey results can be found in Appendix C.

The stakeholders meeting was held on June 28, 2024, and was open to the public and advertised via the County’s Facebook page. Planning team members were also provided with a digital flyer to print or post on social media. A total of 17 people participated in the stakeholders meeting. BHCLG worked with the Lawrence County Emergency Manager and guidance from FEMA’s *Local Mitigation Planning Policy Guide* to create a stakeholders list. The list including agency and contact method can be found in Appendix A. Many invited members serve in multiple capacities in the community such lifelines, education, non-profit, health care, press, and local officials. Federal and state agencies were also invited, as well as the surrounding county’s emergency managers. A list of participants, as well as meeting minutes, sign-ins, and notices/agendas (when applicable) from each meeting are included in Appendix A.

After the draft of the Plan was complete, it was posted on Lawrence County’s website. A notice was also posted on the county’s Planning and Zoning and the Lawrence County Facebook pages. The city of Whitewood also posted a link to the plan on the city’s website. The city of Lead posted a link to the plan on the city’s social media. The public was given opportunity to provide comments from February 18, 2025, to March 19, 2025. During this period no public comment was received.

Notice was emailed to the emergency managers in the neighboring counties. A copy of the email along with any comments is included in Appendix C.

Neighboring Emergency Managers			
Neighboring County	Emergency Manager	Response Received	Comments
Butte, SD	Fred Lamphere	N	NA
Meade, SD	Sean Henderson	N	NA
Pennington, SD	Dustin Willett	N	NA
Weston, WY	Gilbert Nelson	N	NA
Crook, WY	Ed Robinson	N	NA

Table 3.8 Listing of all neighboring county emergency managers.

TECHNICAL REVIEW OF EXISTING DOCUMENTS [§201.6(b)(3)]

Requirement 201.6(b)(3))... *Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information?*

A4-a. *The plan must document what existing plans, studies, reports, and technical information were reviewed and how they were incorporated, if appropriate, into the development/update of the plan.*

A review and incorporation of existing plans, studies, reports, and technical information was completed. Each community was asked to provide a list of existing documents they had available. Documents incorporated into the Plan are cited throughout the document, including the notes section of the Mitigation Action. In addition to the *Lawrence County Pre-Disaster Mitigation Plan* (2018), the author reviewed several other existing documents including but not limited to:

- *South Dakota State Hazard Mitigation Plan* (2024)
- *South Dakota Drought Mitigation Plan* (2015)
- *South Dakota Forest Action Plan* (2020 revision)
- *Dalton Lake Dam Report* (Not Available for Review)*
- *Iron Creek Dam* (Not Available for Review)*
- *Rod & Gun* (Not Available for Review)*
- *GISTM Principle 15 – August 2023 Public Disclosure: Homestake Mine Grizzly Gulch TSF*

- *Homestake Mine Grizzly Gulch Dam Emergency Preparedness Plan (Not available for Review)**
- *USGS Karst Map and Expansive Soils Map*
- *Meade County Natural Hazard Mitigation Plan (2021)**
- *Pennington County Pre-Disaster Mitigation Plan (2018)*
- *Pennington County Natural Hazard Mitigation Plan Draft (2025)*
- *Butte County Pre-Disaster Mitigation Plan (2019)**
- *Not available for review: Weston County, WY and Crook County, WY*
- *Not available for review: High-Risk Dam Emergency Plans* (Protected Documents)*

Note: Documents that were reviewed but not incorporated into this document are marked with an asterisk“*”.

Record of Review – Lawrence County	
Existing program/policy/technical documents	Year
Comprehensive Plan	2020
Community Wildfire Protection Plan	2022
Community Operation Plan	2010
Flood Damage Prevention Ordinance	2012
Flood Insurance Rate Maps	2012
Local Emergency Operations Plan*	Review by LEPC annually
Zoning Ordinances	Updated Various Years
Building Code (IBC & IRC)	2021
WUI (Wildland Urban Interface) Map	2022
Existing Land Use Map	2022
Future Land Use Map*	(Currently Updating)
Subdivision Ordinance	Updated Various Years
Fire Prevention Ordinance (Burn Bans)	2012

Table 3.10 Review of Existing Documents for Lawrence County

Record of Review – Central City	
Existing program/policy/technical documents	Year
Comprehensive Plan*	2021
Flood insurance Studies*	2012
Central City Drainage Evaluation	2023
Stormwater Management Plan*	2024
Zoning Ordinances*	2020
Building Code*	2023/ Adopted 2021
Drainage Ordinance	2012
Subdivision Ordinance*	1998
Fire Prevention ordinance (Burn Bans)	Following local restrictions
City Flood Maps	2012

Table 3.11 Review of Existing Documents for Central City

Record of Review – Deadwood	
Existing program/policy/technical documents	Year
Comprehensive Plan	2018
Community Wildfire Protection Plan (County)	2018
Capital Improvements Plan (Annual Update/Review)	2023
Flood Damage Prevention Ordinance	2012
Floodplain Ordinance	2012
Flood Insurance Rate Maps	2012
Zoning Ordinances	2023
Building Code	2022

Structures Map	2024
Existing Land Use Map	2024
Subdivision Ordinance	2009
Engineering Reports (Landslides)*	1974
Engineering Reports (Flooding/Drainage/Storm sewer) *	2023
Fire Prevention Ordinance (Burn Bans)	2018
City Flood Maps	2012

Table 3.12 Review of Existing Documents for Deadwood

Record of Review – Lead	
Existing program/policy/technical documents	Year
Comprehensive Plan*	2014: Addendum 2017 (Currently Updating)
Facility Plan	2021
Flood Damage Prevention Ordinance	2012: Chapter 152
Floodplain Management Plan*	1995
Flood Insurance Studies	2012
Flood Insurance Rate Maps	2012
Zoning Ordinances	2022
Building Code	2023: Adopted 2021 IBC
WUI (Wildland Urban Interface) Map (County CWPP)	2022
Subdivision Ordinance*	1998: Chapter 154
Engineering Reports (Landslides)*	1995, 2016
Fire Prevention Ordinance (Burn Bans)	Annually following local restrictions, if needed via Resolution

Table 3.13 Review of Existing Documents for Lead

Record of Review – Spearfish	
Existing program/policy/technical documents	Year
Comprehensive Plan	2013 (Currently Updating)
Capital Improvements Plan (Annual Update/Review)	Annual Review
Flood Damage Prevention Ordinance	2012
Flood Insurance Studies	Updated map in 2023
Flood Insurance Rate Maps	2012
Stormwater Management Plan*	1998
Zoning Ordinances	Updated Various Years
Building Code	2021
Transportation Plan*	2011
Subdivision Ordinance	Updated Various Years

Table 3.14 Review of Existing Documents for Spearfish

Record of Review – Whitewood	
Existing program/policy/technical documents	Year
Comprehensive Plan*	2014
Building Codes	IRC 2021/IBC 2021
Subdivision Ordinance*	2017
Zoning	2018

Table 3.15 Review of Existing Documents for Whitewood

REVIEW OF THE 2019 PLAN

Each section of the *Lawrence County Pre-Disaster Plan 2019* was reviewed. Much of the information taken from the 2018 version of the Plan was relevant. Specific areas needing improvement or changes include the planning process, mitigation strategy, risk assessment, and vulnerabilities. Each of the jurisdictions and Lawrence County were provided information on previous risks, concerns, and projects from the 2019 Plan. They were asked to review the information, to provide updates of completed projects and to identify new risks/concerns within their jurisdiction.

IV. RISK ASSESSMENT

Change/Revisions to Risk Assessment: The risk assessment was completely reformatted. Additional specific information was collected for hazards as provided by the jurisdictions and County. To comply with new FEMA requirements the plan also incorporates discussion on future climate variations and vulnerable populations. After the review of the 2018 Plan, the following hazards were **added**: Dam Failure, and Geological. The following were **renamed**: Landslide to Geological, Flash Flood to Flooding, Severe Thunderstorm to Summer Storms, High Velocity Horizontal Winds = High/Severe Winds, Mudslides = Geological, Fire. Wildland and Urban = Wildfire. The following secondary risks were **removed**: Transportation Incident, Hazardous Material Incidents, Utility/Communication Disruption, Aviation Accident, Epidemic, Mass Casualty Incident, Terrorism, Special Event – Civil Disturbance.

IDENTIFYING HAZARDS [§201.6(c)(2)(i)]

Requirement 201.6(c)(2)(i))... Does the plan include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction? Does the plan also include information on previous occurrences of hazard events and on the probability of future hazard events?

B1-a. The plan must include a description of all natural hazards that can affect the jurisdiction(s) in the planning area and their assets, such as dams, located outside of the planning area.

A comprehensive list of hazards was evaluated, and disasters were placed in three separate columns depending on the likelihood of the disaster occurring in the planning jurisdiction. Table 4.1 was derived from the FEMA worksheets provided in the planning handbook for mitigation planning. Hazards that occur at least once a year or more were placed in the High Probability column. Hazards that may have occurred in the past five years but not on a yearly basis were placed in the Medium Probability category. Hazards that could occur every ten years or more or have the potential to occur were placed in the Low Probability column. Hazards or disasters that have never occurred in the area and are unlikely to occur in the planning jurisdiction in the future were placed in the Unlikely to Occur column. The planning group eliminated secondary risks because the

purpose of this Plan is to specifically evaluate mitigation activities for *natural hazards*. While transportation incident, hazardous material incidents, utility/communication disruption, aviation accident, epidemic, mass casualty Incident, terrorism, special event – civil disturbance *can be* a result of a *natural hazards*, that makes them a secondary risk and therefore do not qualify for mitigation programs. Therefore, these hazards have been removed from the plan and were not further evaluated aside from some possible impacts as a result of *natural hazards*.

Only the natural hazards from the High, Medium and Low Probability columns will be further evaluated throughout this Plan. All manmade hazards and hazards in the Unlikely to Occur column will not be further evaluated in the Plan. Table 4.2 below identifies the hazards addressed in the Plan throughout the planning process. Hazards were identified for this Plan in several ways including: observing development patterns, receiving input from jurisdictions, holding public meetings, public survey, historical occurrences, planning work sessions, evaluating previous disaster declarations and consulting the *State Hazard Mitigation Plan 2019* and *South Dakota Hazard Identification and Risk Assessment 2022*.

Natural Hazards Categorized by Likelihood of Occurrence			
High Probability	Medium Probability	Low Probability	Unlikely to Occur
Drought	Biological	Aircraft Accident	Avalanche
Extreme Cold	Utility Interruption	Civil Disorder	Coastal Storm
Extreme Heat	Tornado	Communication Disruption	Hurricane
Flood		Dam Failure	Volcanic Ash
Freezing Rain/Ice		Earthquake	Volcanic
Hail		Ice Jam	Tsunami
Heavy Rain		Landslide	
Heavy Snow		Radiological	
Lightening		Subsidence	
Rapid Snow Melt			
Strong Winds			
Thunderstorm			
Transportation			
Wildfire			
Winter Storm			

Table 4.1 FEMA Assessing Risks list of hazards. (Mitigation Planning Workshop for Local Governments Student Manual May 2004. SM 4-14.)

Jurisdiction Identified Hazards						
Natural Hazards Identified	Lawrence County	Central City	Deadwood	Lead	Spearfish	Whitewood
Dam Failure	L	L	L	L	L	L
Drought	H	H	H	H	H	H
Earthquake	L	L	L	L	L	L
Expansive Soils	L	L	L	L	L	L
Extreme Cold	H	H	H	H	H	H
Extreme Heat	H	H	H	H	H	H
Flood	M	M	H	L	M	L
Hail	H	H	H	H	H	H
Heavy Rain	L	L	H	H	M	L
Landslides	L	L	L	L	L	L
Lightning	H	M	M	M	M	M
Heavy Snow	H	H	H	H	H	H
Strong Winds	H	H	H	H	H	H
Tornados	H	M	M	M	M	M
Wildfire	H	H	H	H	H	H
Winter Storms	H	H	H	H	H	H
NA	Not applicable; not a hazard to the jurisdiction					
L	Low risk; little damage potential (minor damage to less than 5% often jurisdiction)					
M	Medium risk; moderate damage potential (causing partial damage 5-10% of the jurisdiction, and irregular occurrence)					
H	High risk; signification risk/major damage potential (ex. destructive, damage to more than 10% of the jurisdiction and/or regular occurrence)					
O	Jurisdiction did not report hazards					

Table 4.2 Natural Hazards identified by each jurisdiction. *Near proximity to city limits but not within city limits.

Significant Hazard Occurrences

Requirement 201.6(c)(2)(i))... Does the plan include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction? Does the plan also include information on previous occurrences of hazard events and on the probability of future hazard events?

B1-d. The plan must include information on previous hazard events for each hazard that affects the planning area.

The Stafford Act has two types of disaster declarations: emergency declarations and major disaster declarations. These two types allow the President to provide supplemental federal disaster assistance. While there have been several emergency and major disaster declarations made statewide, Table 4.3 shows all recorded events that impacted Lawrence County.

Federal Disaster Declarations	
Incident Period	Types of Disasters
06/10/1972	Heavy Rains, Flooding
06/25/1976	Flash Flooding, Mudslides
10/22/1995 – 10/24/1995	Ice Storm
01/03/1997 – 01/31/1997	Severe Winter Storms/Blizzards
02/03/1997 – 05/24/1997	Severe Storm/Flooding
09/06/2005 – 10/01/2005	Hurricane Katrina Evacuation
05/01/2008 – 05/02/2008	Severe Winter Storm and Record and Near Record Snow
06/02/2008 – 06/12/2008	Severe Storms and Flooding
05/24/2013 – 05/31/2013	Severe Storms, Tornadoes, and Flooding
10/03/2013 – 10/16/2013	Severe Winter Storm, Snowstorm, and Flooding
06/30/2019-07/21/2019	Severe Storms, Tornadoes, and Flooding
01/20/2020 – continuing	Covid-19 Pandemic

Table 4.3 Listing of federal disaster declarations. FEMA Declared Disasters.

NATURAL HAZARDS IN THE PLAN JURISDICTION

Descriptions of the natural hazards likely to occur in the planning jurisdiction are listed in Appendix E. National Oceanic Atmosphere Administration (NOAA) was used to research natural hazards and disasters having occurred within the last ten years within the geographic location covered under the Lawrence County Plan. A summary of the findings for significant hazard occurrences from the past ten years are in Table 4.4:

Significant Hazard Occurrences 2013-2023		
Type of Hazard	# of days with an event Since 2013	Source
Blizzard	7	NOAA
Extreme Cold Temperatures	4	NOAA
Extreme Heat Temperatures	0	NOAA
Drought (At least abnormally dry)	9	Drought.gov
Flash Flood	5	NOAA
Flood	3	NOAA
Hail	228	NOAA
Heavy Rain	1	NOAA
Heavy Snow	27	NOAA
High Wind	35	NOAA
Lightning	1	NOAA
Thunderstorm Winds	63	NOAA
Tornado	4	NOAA
Wildfire	73	National Interagency Fire Center
Winter Storm/Winter Weather	154	NOAA

Table 4.4 List of significant hazards from 2013-08/2023. (NOAA: National Center for Environmental Information, *Storm Event Database*), (Information was taken from National Interagency Fire Center: Historic Fires.) A complete listing of all hazards can be found in Appendix B.

Most of the hazard events listed were obtained using the NOAA website. The data provided spans between 1950 to 2023, as reported by the National Weather Service. Some hazards records are more recent. Data collection and processing procedures have changed over time, creating incomplete data. The information provided helps illustrate the hazards Lawrence County faces. For a more comprehensive collection of the hazards in the county, other sources in the communities and the state were consulted.

The NOAA documented hazard events are believed to be incomplete. To get an accurate picture of Lawrence County, additional sources were referenced when appropriate. With such a high number of occurrences it is reasonable to expect at least some property or crop damage was sustained in the communities during some of the occurrences, even though the damage may not have been reported or recorded. It is possible such damage was not reported because it was thought to be insignificant at the time, or because those responsible for reporting such information did not report to the proper agencies. Unfortunately, the total damage for each event is not available, but hopefully soon a method for collecting this data will evolve so it can be made available to local governments for mitigation planning.

HARZARD PROFILE [§201.6(c)(2)(i)]

Requirement 201.6(c)(2)(i). *Does the plan include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction? Does the plan also include information on previous occurrences of hazard events and on the probability of future hazard events?*

- B1-b.** *The plan must include information on location for each identified hazard*
- B1-c** *The plan must provide the extent of the hazards that can affect the planning area.*
- B1-e** *The plan must include the probability of future events for the identified hazards that can affect the planning area.*
- B1-f** *For the multi-jurisdictional plans, when hazard risks differ across the planning area and between participating jurisdictions, the plan must specify the unique and varied risk information for each applicable jurisdiction and their assets outside the planning area.*

Geographic location of each natural hazard is addressed in this Plan. Most hazards identified have the potential of occurring anywhere in the county except for flooding, geological, and dam failure which are more localized hazards. Wildfire can also occur anywhere in the county, but fire groups were asked to provide areas that they considered to be high risk areas. Previous occurrences are listed individually by the type of hazard and by location in the following tables. Table 4.5 identifies the latitude and longitude of the local jurisdictions along with the population, elevation, and number of occupied homes.

Communities within the County				
Towns	Population	Location	Elevation	Occupied Units
Central City	124	44° 21' 57" N, 103° 46' 20" W	4,918 ft.	61
Deadwood	1,423	44° 22' 36" N, 103° 43' 46" W	4,537 ft.	709
Lead	2,993	44° 21' 08" N, 103° 45' 54" W	5,161 ft.	1,451
Spearfish	12,268	44° 29' 29" N, 103° 51' 35" W	3,652 ft.	5,556
Whitewood	875	44° 27' 40" N, 103° 38' 18" W	3,655 ft.	354

Table 4.5. Population, location, elevation, and occupied units for each of the adopting jurisdictions in Lawrence County. Lawrence County. *Google Earth Pro*), U.S. Census Bureau American Community Survey 2022).

Additionally, the extent (i.e., magnitude or severity) of each hazard, information on previous occurrences of each hazard, and the probability of future events (i.e., chance or occurrence) for each hazard are addressed below. Due to the long listing of all hazard occurrences in the last 72 years, complete history can be found in Appendix B. Future Probability was created using historical data when applicable and consideration for future climate change considerations.

Future Probability Ratings with Climate Variation Consideration	
High	More than 50% change of occurring in a given year.
Med	More than 10% but less than 50%
Low	Less than or equal to a 10% chance of occurring in a given year

Table 4.6. Future Probability Rating.

DAM FAILURE

Future Hazard Probability	
Event Type	Dam Failure
Probability	Low

Table 4.7 Probability future dam failure occurrence.

Dam Failure is usually associated with intense rainfall or prolonged flooding conditions, but it can also occur in any weather condition. The future risk for Dam failure in Lawrence County is low, with no known historical high risk dam failure events in the county and current structural ratings. Dam failure can be caused by a variety of sources including faulty design, construction and operational inadequacies, intentional breaches, aging, seismic events, or a flood event that exceeds the design. Nationwide, from 1848 to 2017, there was an average of ten dam failures per year, with it increasing to twenty-four since 1984 (in dams less than 15 meters tall). It's estimated that a third of dam failures occur from overtopping.¹ The greatest threat from dam failure is to people and property in areas immediately below the dam since flood discharges decrease as the flood wave moves downstream.

In the Northern Great Plains, projected future weather patterns call for more intense rain events and longer dry periods, which could increase the overall risk of dam failure.² Flooding caused by heavy rains could create situations such as overtopping. In addition, structure stability can also be at risk due to geological events such as earthquakes or flood-induced damage. Structure can also be affected by wet-dry periods. Embankment dams are susceptible to seepage due to cracks and erosion created by drought conditions, creating weakened stability.³ Future climate variations could have even more impact on older dams, whose construction wasn't designed for more intense dry and wet patterns.

The degree and extent of damage depend on the size of the dam and circumstances of the failure. A large dam failure might bring about considerable loss of property, destruction of cropland, roads and utilities, loss of income, environmental devastation, and even loss of life. Small dam failure can also have consequences such as a loss of irrigation water for a season and extreme financial hardship for many farmers. With the exception of the Grizzly Gulch Tailings Storage Facility, which is classified as an earth-rockfill dam with a clay core, most dams in Lawrence County are classified as ER (earthen dams)⁴:

Embankment dams are made mainly of rock and soil and have lower construction costs than concrete dams, but they are more likely to fail by overtopping. As the dam overtops, the material erodes until there is complete failure. These dams are also prone to seepage, piping, and internal erosion, all of which involve complete mechanisms. Insufficient drainage, corrosion of outlet pipes, deformation and settlement of the materials, surface erosion, loss of strength due to improper compacted fill or cycles of wetting and drying/freezing and thawing, vegetation, and animal activity can lead to structural failure. Internal erosion is the most common aging scenario of the foundation of earth and rockfill dams.⁵

¹ Concha Larrauru, Paulina & Upmanu Lall. 2020.

² USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*.

³ Ibid. Concha Larrauru.

⁴ Barrick. 2023. GISTM Principle 15 – August 2023 Public Disclosure. Homestake Mine Grizzly Gulch TSF.

⁵ Ibid. Concha Larrauru.

South Dakota's Department of Agriculture and Natural Resources Water Rights Program provided an inventory of the dams which are large enough to fall under South Dakota's Safety of Dams Rules, see Appendix B. Lawrence County has a total of 11 dams identified by the Water Rights Program Dam Inventory. The National Inventory of Dams uses five classifications of hazard potential for dams: low, significant, high, undetermined, and not available (Table 4.8). Dams with a classification of high-risk are required to have inspections every five years. With the threat posed by high-risk dams, new developments in the identified hazard areas should be discouraged.

National Inventory of Dams Classification Table			
Dam Hazard Potential Classification	Low Hazard	Significant Hazard	High Hazard
Loss of human life	None expected	None expected	Probable
Economic losses	Low and generally limited to owner	Yes	Yes (but not necessary for this classification)
Environmental damages	Low and generally limited to owner	Yes	Yes (but not necessary for this classification)
Lifeline interests impacted	No	Yes	Yes (but not necessary for this classification)

Table 4.8. Dam Hazard Potential Classifications. The table was taken from the National Inventory of Dams. (National Inventory of Dams. 2022. *Managing Dams*)

Lawrence County has four high-risk dams classified by the National Inventory of Dams as of December 2023. Limited information was available for federally owner dams. The emergency plans for high-risks dams were not available to the author of this plan for review. High-risk dams located outside of the county were reviewed for any potential impact in Lawrence County in the event of failure. During the review there were no identified high-risk dams that would have had an impact in Lawrence County.

High-Risk Dams in Lawrence County						
	Rating	Date of Inspection	Date Complete	Maximum Storage (ac-ft)	Owner	Nearest Downstream Hazard
Dalton Lake	Not Rated	09/25/2019	1974	41	Federal	Piedmont
Grizzly Gulch Tailing Dam	Satisfactory	09/06/2022	1998	20,200	Private	Pluma
Iron Creek Lake	Not Rated	05/29/2020	1937	517	Federal	Spearfish
Rod & Gun	Not Rated	09/24/2019	NA	29	Federal	Cheyenne Crossing
Classification Definitions						
Satisfactory	No existing or potential deficiencies are recognized					
Fair	No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydraulic and/or seismic events may result in a dam safety deficiency					
Poor	A dam safety deficiency is recognized for loading conditions which may realistically occur. Remedial action is necessary					
Unsatisfactory	A dam safety deficiency is recognized that requires immediate or emergency remedial action					
Not Rated	This dam has not been inspected or have been inspected but not rated					

Table 4.9. High-Risk Dam in Lawrence County. (National Inventory of Dams)

Grizzly Gulch Tailings Storage Facility (TSF) has the potential to have material impacts to several communities as a result of a highly unlikely catastrophic failure. The TSF is a closed facility owned by Homestake Mining Company (HMC), a subsidiary of Barrick Gold Corporation. Each stage of the facility has been engineered and the design, construction and closure of the facility was overseen by a qualified engineer and the appointed Engineer of Record. The facility continues to be monitored and maintained by qualified personnel employed by HMC.

As part of this update HMC was consulted to help evaluate the potential consequences of an unlikely failure of this facility. A summary of the potential materially impacted areas in the event of a TSF failure is summarized in Barrick's *Global Industry Standard on Tailings Management, Principle 15, August 2023 Public Disclosure (Public Disclosure)*. Potentially impacted areas for evacuation would include: Residents, businesses, and churches located between the

dam and West Strawberry Creek, along West Strawberry Creek, along Whitewood Creek, and Belle Fourche River, and in low laying areas in Lead, Deadwood, and Whitewood. ⁶ Potentially impacted Interstates and State Highways would include State Highway 79 between mile marker 126 and 128, US Interstate 90 between mile markers 24 and 26, US Highway 14A between mile markers 40 and 43, US Highway 85 from mile marker 26 to mile marker 42 on US Highway 14A, US Highway 385 from mile marker 122 to mile marker 26 on US Highway 85 areas. Impacts to community critical infrastructure are summarized in the Summary of Potential Material Impacts table in Section 15.B.4 of the Public Disclosure.

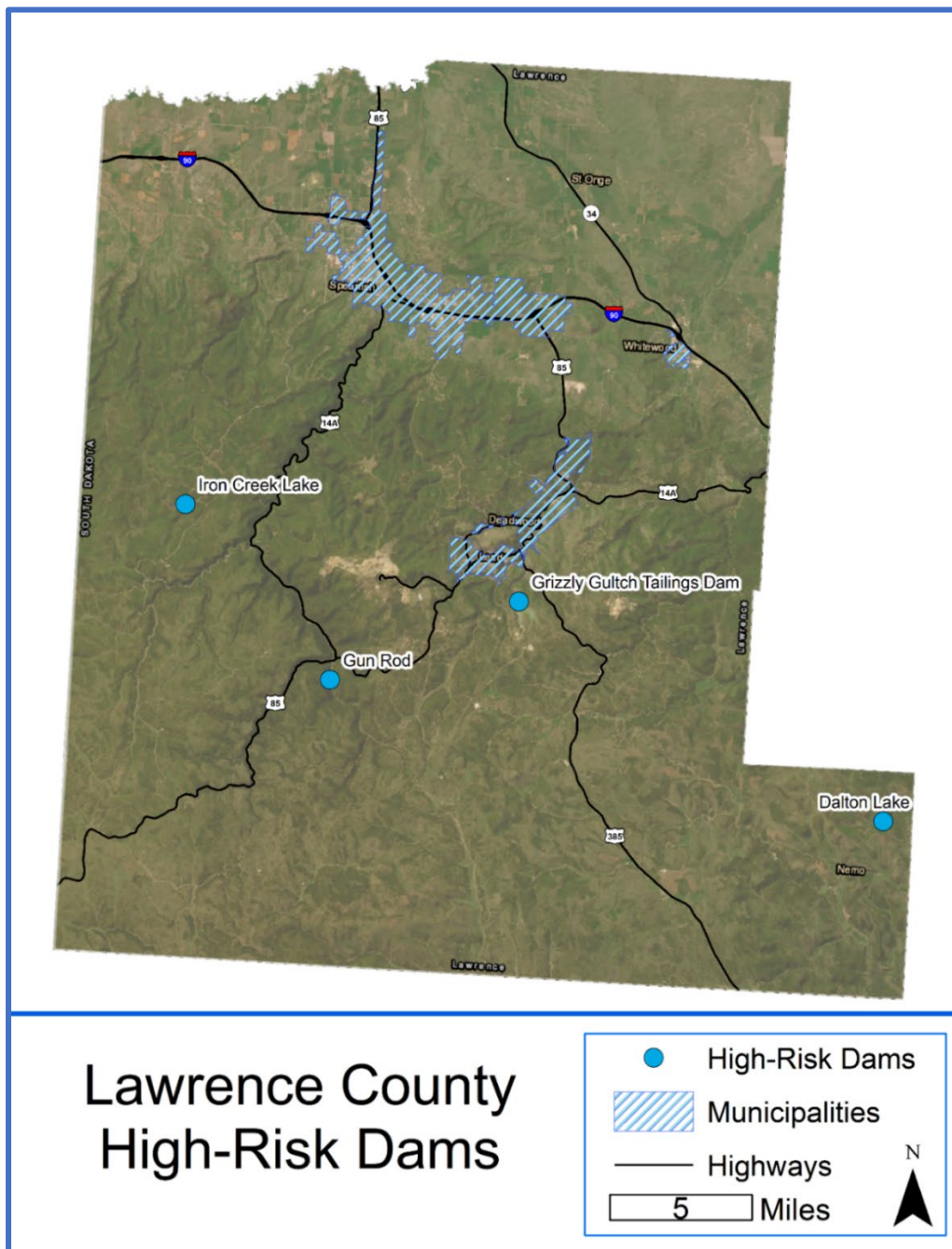


Figure 4.1 Lawrence County High-Risk Dam Locations

DROUGHT

⁶ Barrick. 2023. GISTM Principle 15 – August 2023 Public Disclosure. Homestake Mine Grizzly Gulch TSF.

Future Hazard Probability					
Event Type	Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
Probability	High	High	High	Med	Med

Table 4.10. Future probability of drought future occurrence based on National Integrated Drought Information System (National Integrated Drought Information System. *Drought Conditions for Lawrence County: Historical Conditions for Lawrence County*)

Drought Category System
DO – Abnormally Dry
Grain and pasture growth is stunted
D1 – Moderate Drought
- Topsoil is dry; grain crop yields decline - Pasture and water supplies decline; cattle industry under stress
D2 – Severe Drought
- Planting begins early, irrigation use increases - Hay is short; cattle sales are early
D3 – Extreme Drought
- Row crop loss is significant - Producers haul water for cattle and provide supplemental feeding; cattle sales increase
D4 – Exceptional Drought
- Row crop loss is significant; producers are selling livestock herds; market price fall - Epizootic hemorrhagic disease spreads: wildlife populations decline; recreational fishing and hunting are affected - Extremely low flow and river debris impair navigation of major rivers; commercial barge traffic slows; water use restrictions are implemented

Table 4.11. U.S. Drought Monitor – Drought 5-Category System. (National Integrate Drought Information System. 2023. *Drought Conditions for Lawrence County: Current Conditions for Lawrence County*)

FEMA National Risk Index	
Drought	Very Low
*Based on Agricultural (crop only) impacts	

Lawrence County has experienced many droughts throughout history, lasting for months or several years. Figure 4.3 shows the complete drought history for the county from 1895 to 11/2023. From 2018 to 2022, there have been roughly 35 months classified as at least abnormally dry drought conditions. Droughts can occur anywhere in Lawrence County.

The Northern Great Plains region is predicted to have a rise in temperatures and an increase in extreme precipitation, with longer spans between bouts of precipitation. All these factors have an impact on the future drought conditions for the region. It is projected that from 2020s to 2040s, there will be an increase of 0.3 dry days at higher emissions.⁷ Higher temperatures impact the effect evaporation rates have on soil moisture, streamflow, and snowpack.⁸ South Dakota is expected to see increases in evaporation rates as a result of rising temperatures. More information on raising temperature can be found in the Extreme Temperatures Section of this plan. The higher evaporation rates are predicted to impact the warm-season's soil moisture loss and intensity of droughts.⁹ Increased drought conditions are also connected to other hazard risks such as flash flooding and wildfire.

Figure 4.2 shows the drought conditions from 2010 to November 2023. It is highly probable there can be a drought in any given year. Long-term drought in Lawrence County ranges from extreme drought to wet. The long-term

⁷ U.S Federal Government. 2023: U.S. Climate Resilience Toolkit Climate Explorer.

⁸ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*

⁹ Frank, R. et al. 2022.

drought information, Figure 4.6, is derived from several different methodologies, including PDSI, Z-index, 6- month, 1-year, 2-year, and 5-year SPI estimates.¹⁰

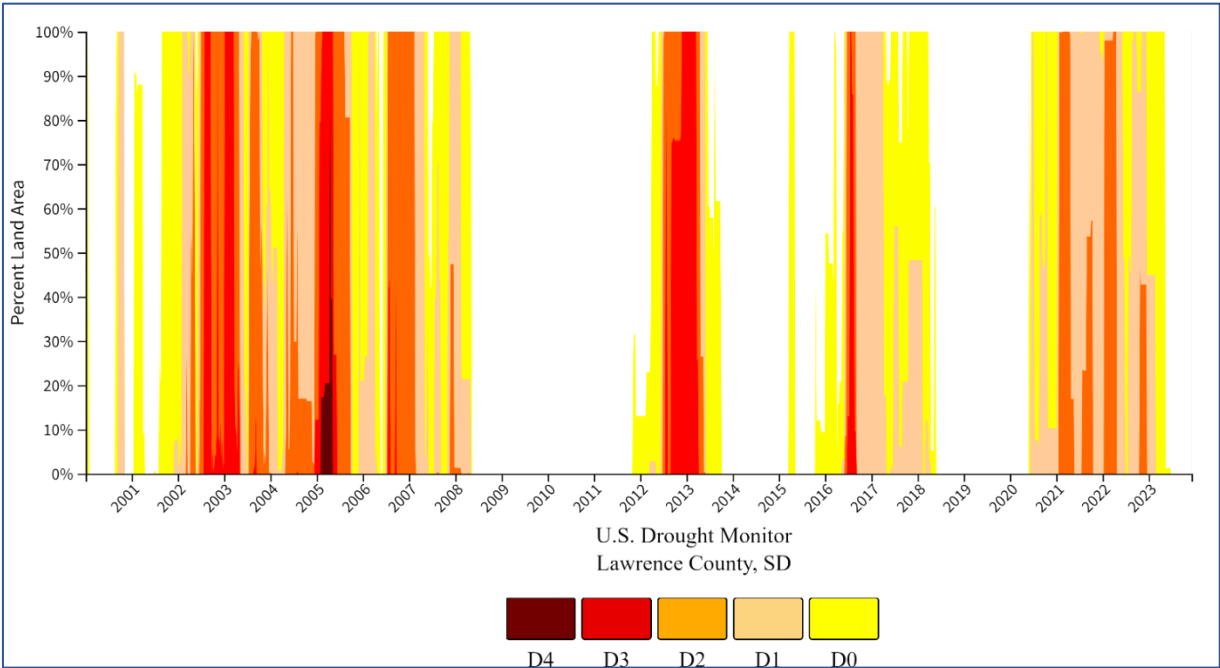


Figure 4.2. Lawrence County drought conditions from 2000 to 2023. Accessed 12/07/2023. (National Integrated Drought Information System. (2023). *Drought Conditions for Lawrence County: Historical Conditions for Lawrence County*)

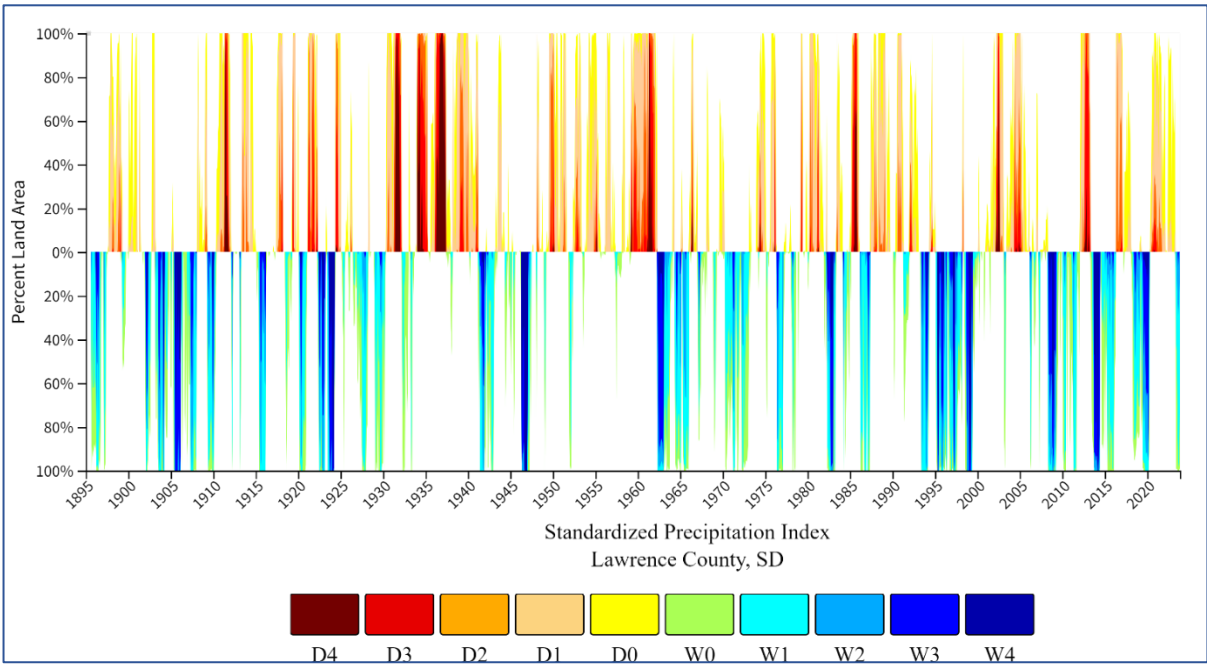


Figure 4.3. Lawrence County's drought conditions from 1895 to 11/2023. Accessed 12/07/2023. (National Integrated Drought Information System. (2023). *Drought Conditions for Lawrence County: Historical Conditions for Lawrence County*).

¹⁰ National Integrated Drought Information System. *Drought Conditions for Lawrence Count: Historical Conditions for Lawrence County*

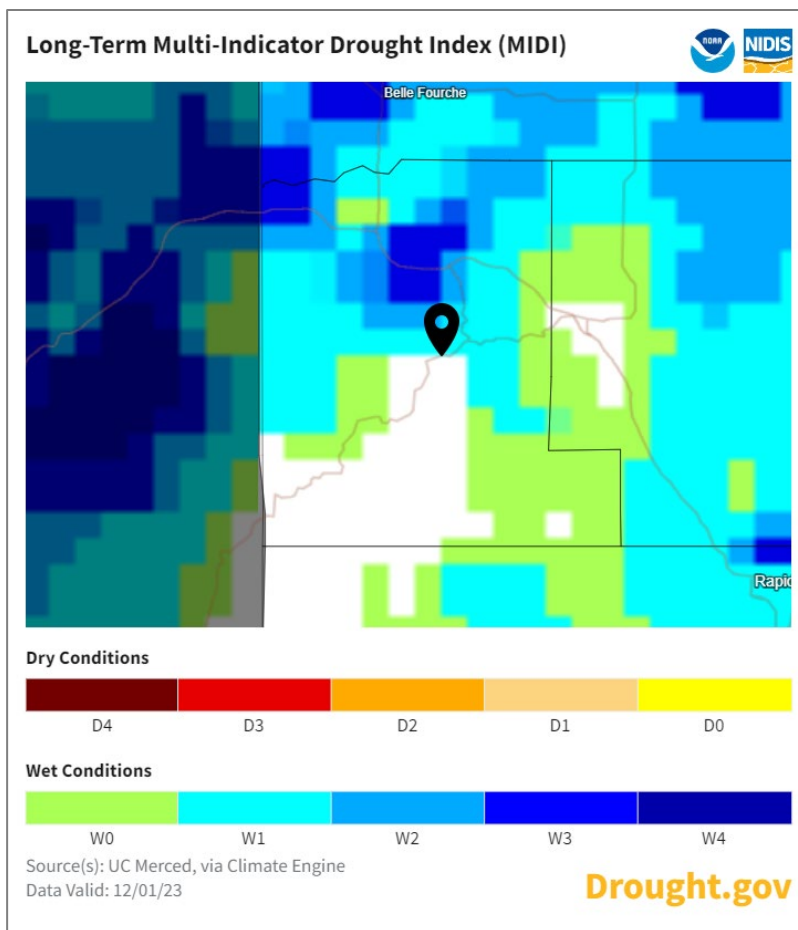


Figure 4.4. Lawrence County's long-term drought conditions. Accessed 12/07/2023. (National Integrated Drought Information System. (2023). *Drought Conditions for Lawrence County*).

EXTREME TEMPERATURES

Future Hazard Probability		
Event Type	Cold Wave	Heat Wave
Probability	Med	Low

Table 4.12. Probability of future extreme temperatures occurrence. Calculations based on NOAA weather data can be found in Appendix B. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

Extreme temperatures encompass extreme cold, extreme heat, and cold wind chills. Defining extreme temperatures is somewhat subjective, as people in the area may have adapted to extreme temperatures which results in these weather events not being reported as often as they occur.

FEMA National Risk Index	
Cold Wave	Relatively High
Head Wave	No Rating

Lawrence County has varying temperatures due to the varying elevation. The county ranges from roughly 4,500 ft to slightly more than 5,280 ft. The high elevations typically experience cooler temperatures and higher precipitation while the lower elevations tend to see warmer temperatures and less precipitation.¹¹

¹¹ Lawrence County Pre-Disaster Mitigation Plan 2018

South Dakota generally experiences large temperature extremes.¹² Most of the county falls in the Köppen climate type of BSk (cold semi-arid climate).¹³ Lawrence County is classified as a semi-arid climate, which tends to have warm-hot summers and cool/cold winters. Semi-arid climates often receive between 10-20 inches of precipitation annually.¹⁴

Based on historic data ranging from 1901-2016, the Northern Great Plains are projected through, at least 2100, to continue seeing an increase in warm temperatures and a decrease in colder temperatures over time. Nationwide, warmer temperatures were most prominent during the winter months with an increase of 1.5°F. The Northern Great Plains experienced generally cooler summer months. This region, compared to the contiguous United States, has seen one of the highest temperature increases of cold days.¹⁵ Similarly, South Dakota has seen very little warming during summer months, with warming generally seen during winter months. Another observation of the State is that the nighttime minimum temperatures show an increase nearly double that of daytime maximums, which may be attributed to the increase of absolute humidity.¹⁶

In the United States, between 1895-2016, average temperature has increased around 1.2°-1.8°F. Using the difference in temperature between present day (1986-2016) and the last century (1901-1960), the Northern Great Plains has seen an annual average temperature increase of 1.69°F.¹⁷ From 1900-2020 South Dakota has seen an increase of 2°F.¹⁸ The State Climate Summary 2022 projects that temperature changes in the next 100 years can range from around 2.5°F to slightly above 15°F. This range is highly dependent on the emission levels over time.¹⁹

Northern Great Plains Temperature Changes	
Change in Annual Average Temperature	1.69°F
Change in Coldest Day of the Year	4.40°F
Change in Warmest Day of the Year	-1.08°F

Table 4.13. Temperatures based on the difference between present-day (1986-2016) to the last century (1901-1960). (USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1.*)

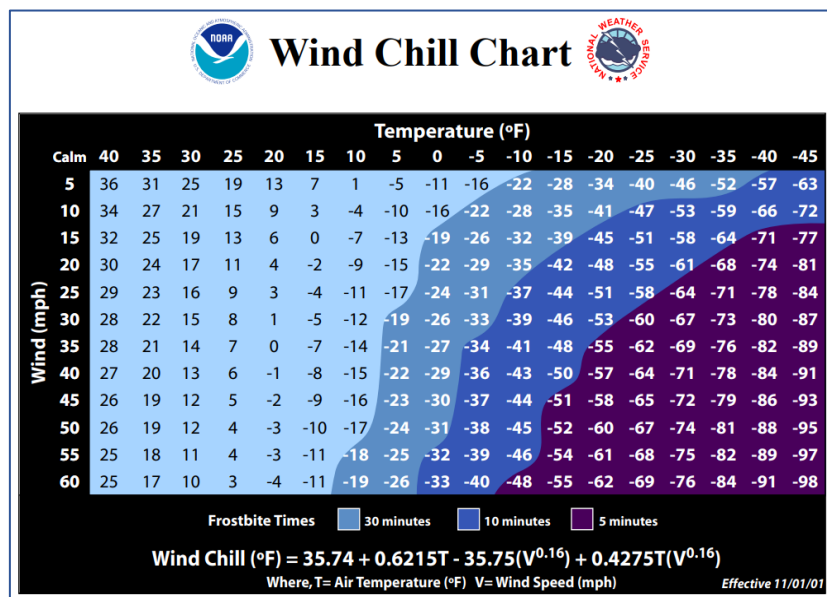


Figure 4.5. Wind Chill Chart. NOAA

Figure 4.5 shows the impacts of cold wind chills can have on time till frostbite can occur. Frostbite, an injury caused by freezing, can create a loss of feeling and color to the body. Injuries can be extreme enough to permanently damage body tissues and amputations may be required in severe cases.²⁰

Heat Factor was also used to estimate the risk for Lawrence County in the next 30 years (Table 4.14). The methodology used considers several factors such as landscape, vegetation, elevation, urbanization, and distance to water bodies and coastlines. Overall, Lawrence County has a minor risk from heat. This is determined by averaging the current and future high “feels like” temperatures for the county.²¹

¹² Frankson, R. et al. 2022.

¹³ Peel, MC, Koppen-Geiger climate classification – 2007.

¹⁴ National Park Service. *Arid and Semi-arid Region Landforms.*

¹⁵ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1.*

¹⁶ Frankson, R. et al. 2022.

¹⁷ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1.*

¹⁸ Frankson, R. et al. 2022.

¹⁹ Frankson, R. et al. 2022.

²⁰ CDC. *Cold Stress – Cold Related Illnesses in Workers. 2024*

²¹ Risk Factor. 2023. *Methodology used to determine community Heat Factors.*

Lawrence County Heat Factor: Heat risk over the next 30 years			
Risk Type	Definition	This year	+30 years
Heat Wave Likelihood	3+ or more days of temperatures feeling like 90°F or higher.	52%	80%
Health Caution Days	Feels like 90°F or higher can be physically hazardous, especially high-risk individuals.	4 days	18 days
Dangerous Days	Feels like 100°F or higher can be dangerous over a period of time.	0 days	1 day
Hot Days	Feels like 90°F or higher in Lawrence County.	2 days	16 days

Table 4.14 Heat Factor present and future risk for Lawrence County. Definitions and projects are specific to Lawrence County, SD. Risk Factor. 2023. Heat Factor

The location for extreme temperatures is not specifically identified by jurisdiction due to the vast area across South Dakota affected by extreme temperatures. Below is an example of events of extreme temperatures; a listing of all events can be found in Appendix B.

Significant Weather Events – Extreme Temperatures	
Historic	➤ 01/09/1997 – Arctic air lowered temperatures into the ten to 30 below zero range for overnight lows with highs remaining below zero. A persistent northwest wind produced wind chill indices from 30 to 70 below zero through the period. The bitter cold made digging out from the recent blizzard difficult. Also, the cold contributed to damage and loss of livestock. ➤ 12/16/2016 - Arctic air pushed into the area behind an existing storm system. High temperatures were below zero on the 17th, with temperatures dropping to 15 below to 35 below zero on the morning of the 18th. An official NWS cooperative observer in Hoover recorded a low temperature of 39 below zero on the morning of the 18th. Wind chill values were as low as 45 below zero across the area. ➤ 12/30/2017 - An Arctic airmass settled over the area, with high temperatures remaining below zero in most areas and low temperatures dropping to 15 below to 35 below zero, with the lowest values over northwestern South Dakota. Wind chills as low as 45 below zero developed over northwestern South Dakota. ➤ 01/01/2018 - Bitterly cold air remained across the area into the beginning of the new year. Lows on New Year's Day morning ranged from 15 below to 35 below zero across much of the area, with some locations across northwestern South Dakota dropping to 35 below to 45 below. Wind chills were as low as 35 below to 50 below on the plains. Very cold conditions continued into the morning of January 2 across northwestern and west central South Dakota.
Since 2019	➤ 01/09/1997 – Arctic air lowered temperatures into the ten to 30 below zero range for overnight lows with highs remaining below zero. A persistent northwest wind produced wind chill indices from 30 to 70 below zero through the period. The bitter cold made digging out from the recent blizzard difficult. Also, the cold contributed to damage and loss of livestock. ➤ 02/14/2021 - An Arctic air mass settled over the Northern Plains for a prolonged period, producing bitterly cold temperatures and extremely low wind chills. Low temperatures were well below zero across the area, with wind chills as low as 35 below to 50 below zero. ➤ 12/21/2022 - An Arctic airmass settled over the region, bringing bitterly cold temperatures and gusty winds that produced wind chills of 30 below to 55 below zero at times from late day on the 20th through the 23rd. A period of light snow developed across much of the area on the 21st, bringing light accumulations and blowing snow, greatly reducing visibility at times through the 22nd. ➤ 12/2023 – A week before Christmas Lead, Deadwood, Terry Peak experienced temperatures reaching 27 below accompanied by strong winds with gusts up to 45mph.

Table 4.15 Significant Events – Extreme Temperatures

FLOODING

Future Hazard Probability		
Event Type	Flash Flood	Flood
Probability	High	Med

Table 4.16. Probability of future flooding occurrence including future climate variations. Calculations based partially on NOAA weather data can be found in Appendix B. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

FEMA National Risk Index	
Riverine Flooding	Relatively Low

Flooding/flash flooding is a temporary overflow of water onto lands not normally covered by water, producing measurable property damage, or forcing the evacuation of people and resources. Floods can result in injuries and even loss of life when fast-flowing water is involved. Six inches of moving water is enough

to sweep a vehicle off a road. Disruption of communication, transportation, electric service, and community services, along with contamination of water supplies and transportation accidents are very possible. Flooding is a longer event than flash flooding. Flooding can last for days to weeks, while flash flooding is generally inundation lasting less than 6 hours. Flash flooding often occurs after heavy or excessive rain events.²²

Many factors can affect flooding including deforestation, urbanization, dams, rapid snow melt, floodwater management activities, and different agricultural practices. The NOAA storm database does not have occurrences before 1996 documented. This is likely due to the lack of reporting that occurred prior to that time. However, this does run the risk of overstating the probability of flood and flash flood occurrence each year.

The Northern Great Plains region is expected to see an increase in less frequent but more extreme precipitation events accompanied by longer periods without precipitation. Flooding is more likely to occur when drier soils are inundated with heavy amounts of water. Steep rock canyons can also be attributed to flash flooding events in Lawrence County, as creeks can be inundated with heavy rainfall creating strong walls of water. As the region sees drier conditions with periods of extreme precipitation, it is more likely the amount of flash flooding events will also increase. Precipitation amounts vary from season to season. Over the past decades, general precipitation has increased throughout the United States. The season with the greatest increase was fall, which has had an increase of 15% since the twentieth century. The winter months and summer months have shown a negative percentage change over time, in some areas as much as -5% to -10%.²³

Flood Recurrence Intervals	
Intervals	Percentage in any given year
10 year	10% probability
25 year	4% probability
50 year	2% probability
100 year	1% probability
500 year	0.2% probability

Table 4.17. Flood recurrence intervals: statistical expectation of inundation frequency. (SD Enhanced Mitigation Plan 2024)

Higher temperatures will also have an impact on the evaporation rates effect on soil moisture, streamflow, and snowpack.²⁴ The *South Dakota State Hazard Mitigation Plan 2019* points out that the special flood hazard areas are expected to increase nationwide by as much as 40%-50% over the next 100 years. This is attributed not only to the increase in precipitation but also to the increased urbanization of areas.²⁵

²² NOAA: National Centers for Environmental Information. 2022. *Flood and flash flood definitions*

²³ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*.

²⁴ Ibid. USGCRP.

²⁵ *State of South Dakota Hazard Mitigation Plan*. 2024

Flood Factor: Flooding Risk	
Category Type	Risk
Overall, Lawrence County	Major
Residential	Minor
Commercial	Minor
Infrastructure	Severe
Social	Severe
Roads	Extreme

Table 4.18. Flood Factor Summary. Lawrence, SD. (Risk Factor, 2024, Flood Factor).

The use of *Risk Factor* can assist in projecting the future flooding risk of the county. The First Street Foundation Modeling method shows specific locations at risk of flooding from rain, rivers, tides, and storm surge. The model is comprised of decades of peer reviews, climatology models, hydrology, and statistics.²⁶ Risk scores have five categories: minor, moderate, major, severe, and extreme. The scores are reflective of the weighted percentages of properties, facilities, and roads with operational risk at a given depth. The model also considers climate variations over time, such as altered frequency and severity of weather events.²⁷

National Flood Insurance Program Participation

Requirement 201.6(d)(3)(ii) ... Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate?

C2-a. The plan must describe participation in the NFIP for each participant, as applicable, in accordance with NFIP regulatory requirements.

Lawrence County and all municipalities participate in the National Flood Insurance Program. The county's latest FIRM Maps were completed April 17, 2012. The County's Zoning Ordinance: Flood Plain District, serves as the county's floodplain ordinance and meets the minimum requirements for the National Floodplain Insurance Program.

The Lawrence County Planning Director serves as the county's floodplain administrator. Lawrence County requires a flood development permit for construction of existing and new developments within the Special Flood Hazard Area (SFHA). The county can also administrate areas with documented flooding concerns that may not be identified as a SHFA. This ordinance was last updated on April 9, 2019.

Lawrence County Municipalities NFIP Status Information				
Community	Initial Flood Hazard Boundary Map	Initial FEMA Insurance Rate Map	Current Effective Map Date	Reg. Program/Emergency Program Date
Central City	NA	04/17/2012	04/17/2012	09/24/2012
Deadwood	07/11/1975	04/16/1990	04/17/2012	02/03/1982
Lead	02/07/1975	04/17/2012	04/17/2012	04/17/2012
Spearfish	03/29/1974	09/02/1981	04/17/2012	09/02/1981
Whitewood	08/13/1976	04/17/2012	(NSHFA)	11/30/1983

Table 4.20. Lawrence County NFIP Communities Status

The Flood Plain District states any new construction, or substantial improvements should be constructed to minimize flood damage and shall comply with all applicable provisions listed in the ordinance. This includes the use of flood resistant materials and utilities. Additionally, structures should be designed or modified and anchored to prevent flotation, collapse or lateral movement. All new construction and substantial improvement of any residential structure must have the lowest floor elevated at least one foot above the FIRM Base Flood Elevation (BFE).

Lawrence County's current ordinance does not specify the process for determining substantial damage to a structure. However, the county considers a structure to be substantially damaged when the cost to repair it exceeds 50% of its market value. As new FEMA Flood Insurance Rate Maps (FIRMs) become available, the county will need to update its floodplain ordinance to align with the revised maps. Given the potential for FEMA to update these maps in the future, it will be important for the county to stay proactive in ensuring its ordinance remains consistent with any changes to floodplain designations.

²⁶ First Street Foundation. *First Street Foundation Flood Model 2020 Methodology Overview*

²⁷ Risk Factor. *Community methodology – Is your community at risk of flooding? 2022.*

Lawrence County Municipalities Overview				
Community	Population	Location	Elevation	NFIP
Central City	124	44° 21' 57" N, 103° 46' 20" W	4,918 ft.	Yes
Deadwood	1,423	44° 22' 36" N, 103° 43' 46" W	4,537 ft.	Yes
Lead	2,993	44° 21' 08" N, 103° 45' 54" W	5,161 ft.	Yes
Spearfish	12,268	44° 29' 29" N, 103° 51' 35" W	3,652 ft.	Yes
Whitewood	875	44° 27' 40" N, 103° 38' 18" W	3,655 ft.	Yes

Table 4.19 Lawrence County Municipalities Overview, including participation in National Flood Insurance Program (NFIP). Lawrence County. *Google Earth Pro*, U.S. Census Bureau Decennial Census 2020).

Flooding in 2019 impacted several areas in Lawrence County including south of Maitland, Boulder Canyon, Higgins Gulch, and Galena. The Galena area saw several homes that had damaged culverts and inundated water crossings along Bear Butte Creek. Gelena Road was also partially washed out because of the flooding.

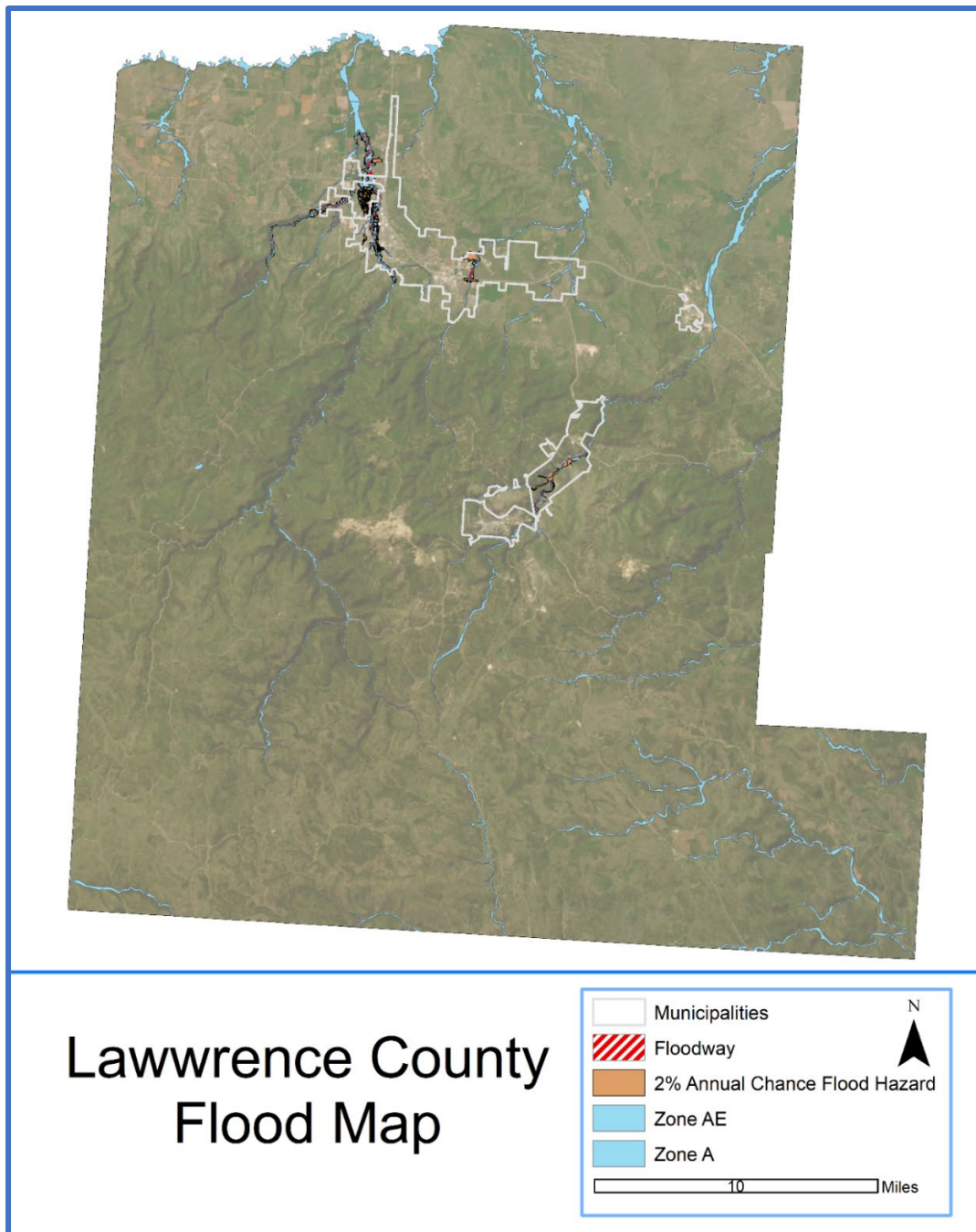


Figure 4.6 Lawrence County Flood Map.

Significant Weather Events – Flood	
Historic	➤ 05/16/1883 – Heavy, wet spring snowstorm caused flooding which washed away most of Deadwood. Four deaths and \$250,000 damage were reported. ➤ 06/14/1907 – A massive storm caused widespread flooding in several counties resulting in the loss of homes and lives. ➤ 05/1907 – 06/1907 – Thunderstorms flooded streets, railroads, and mines in Deadwood, Lead and Spearfish. Spearfish Creek was ½ mile wide at the mouth causing homes to be evacuated. ➤ 05/1965 – Mother’s Day snowstorm hit the area, followed a few days later by heavy rain and warming temperatures created rapid snow melt caused severe flooding. Several locations in Lawrence County were impacted including Spearfish, Spearfish Canyon, Redwater-River, and Highway 85. ➤ 05/27/1996 - A slow moving closed low-pressure system and persistent upslope flow contributed to rainfall amounts of 4 to 8 inches over much of Western South Dakota from 5/21 through 5/27. The widespread flooding began on 5/27. Minor property damage, such as flooding to basements, was common. Numerous roads and bridges were washed out and several residents and campers near streams had to be evacuated. A mud slide along Highway 34 near Sturgis cut off water to a hospital and school for several days. River flooding occurred along the Moreau, Cheyenne, Little Missouri, Bad, White, and Little White Rivers. ➤ 5/23/2008- Three to five inches of rainfall over the northern and central Black Hills and eastern foothills caused flooding. The water covered secondary roads and side streets, washed out several roads and culverts, and flooded yards. Heavy rain caused flooding in Spearfish, Whitewood, and St. Onge. Minor flooding was observed along the Redwater River, False Bottom Creek, and Whitewood Creek. ➤ 6/4/2008- Two and a half to three and a half inches of rain on saturated soils damaged homes and destroyed culverts and roads. Heavy rain caused flooding in Whitewood and Spearfish. Water covered Highway 85 south of Interstate 90. Flooding was observed along Whitewood Creek, False Bottom Creek, Bear Butte Creek, Spearfish Creek, and their tributaries. (Damages reported: \$1,000,000) ➤ 6/1/2013- A large upper-level low pressure system pushed across the Northern Plains, bringing heavy rain to the northern Black Hills. Embedded thunderstorms produced additional heavy rain, with four to six inches of rain falling over a 24-hour period. Runoff caused minor flooding along the Belle Fourche River and its tributaries. Several county roads were closed or washed out and culverts were damaged. Redwater River, Spearfish Creek, False Bottom Creek, and other streams in the Spearfish area experienced flooding. Minor flooding occurred in the Spearfish City Park. Red Hill Road at Crow Creek, Sanford Road into Beulah, and Homestake Road at the Bear Creek Bridge were flooded, and several culverts were damaged. (Damages reported: \$50,000)
Since 2019	➤ 7/5/2019 - A severe thunderstorm produced hail to quarter size in the Sturgis area. One to two inches of heavy rain over saturated ground caused flooding across parts of eastern Lawrence County into the Sturgis area. Flooding continued across the area from heavy rainfall. Runoff from additional rainfall during the afternoon and evening of July 5 kept creek levels high into the morning hours on July 6. ➤ 6/23/2023- A strong thunderstorm produced hail to penny size in Saint Onge and heavy rain across the northern foothills area. Runoff from the heavy rain caused significant flooding in Spearfish and across other portions of northern Lawrence County. Asphalt buckled and gravel washed off numerous roads from the flooding and damaged buildings. Runoff from heavy rain caused considerable damage in Spearfish. Numerous roads flooded and asphalt buckled on portions of Main Street and Jackson Boulevard. The USGS gage, Spearfish Creek at Spearfish, recorded its fifth highest level since 1947 with a flow of 1900 cfs. Damage was reported at several locations, including the DC Booth National Fish Hatchery and a private apartment complex.

Table 4.21 Significant weather events of flooding in Lawrence County. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

GEOLOGICAL

Future Hazard Probability				
Event Type	Earthquake	Expansive/Erosive Soils	Landslide	Subsidence
Probability	Low	Med	Med	Med

Table 4.22. Probability geological occurrence. Calculations are based on data provided from South Dakota Geological Survey. Appendix B has no data for many of these hazards.

FEMA National Risk Index	
Earthquake	Very Low
Landslide	Relatively Moderate

Geological hazards can include events such as earthquakes, landslides, subsidence, and expansive soils. While data on earthquakes can be easily found, while records on landslides, subsidence, and expansive soils incidents and specific locations are limited.

Earthquakes: From 1872 to 2022, there were only two recorded earthquakes in Lawrence County: one in 1991 and the other in 1993. Earthquakes have the potential to happen anywhere in Lawrence County. The area east of the Rocky Mountains experiences infrequent earthquakes. Earthquakes that do occur are often of a low magnitude and rarely result in major damages, like those seen on the western coast of the United States.²⁸ The South Dakota Geological Survey explained that earthquakes happen every few years in South Dakota but are not large enough to be considered threatening to life or property. Since 1872, there have been nearly 100 recorded earthquakes in South Dakota. Since South Dakota doesn't have any major faults, the South Dakota Geological Survey states:

The likely cause of these earthquakes are adjustments deep in the basement rocks underlying the state or ongoing rebound of the earth's crust from compression by ice sheets during the last ice age.

Although variations in climate have the potential to increase earthquake-related hazards due to rising temperatures, there is not enough data to suggest that it will cause the county to experience more earthquakes.

Earthquake Magnitude Scale	
Magnitude	Description
2.5 or less	Usually not felt, but can be recorded by seismograph
2.5 to 5.4	Often felt, but only causes minor damage
5.5 to 6.0	Slight damage to buildings and other structures
6.1 to 6.9	May cause a lot of damage in very populated areas
7.0 to 7.9	Major earthquake, serious damage
8.0 or greater	Great earthquakes can totally destroy communities near the epicenter

Table 4.23. Earthquake Magnitude Scale. Source: Michigan Tech.

Earthquake Magnitude Scale		
Intensity	Shaking	Damage
Intensity 1	Not felt	None
Intensity 2	Weak	None
Intensity 3	Weak	None
Intensity 4	Light	None
Intensity 5	Moderate	Very Light
Intensity 6	Strong	Light
Intensity 7	Very Strong	Moderate

²⁸ USGS. *East vs West Coast Earthquakes*.

Intensity 8	Severe	Moderate/Heavy
Intensity 9	Violent	Heavy
Intensity 10	Extreme	Very Heavy

Table 4.24. Modified Mercalli Intensity Scale. USGS.

Significant Weather Events – Geological	
Historic	➤ 11/05/1991 – An earthquake with a magnitude of 2.5 was recorded at (44.35, -103.75) ➤ 09/05/1993 – An earthquake with a magnitude of 2.7 was recorded at (44.4, -103.8)

Table 4.25. Significant weather events of geological events in Lawrence County. (South Dakota Geological Survey. 2022.).

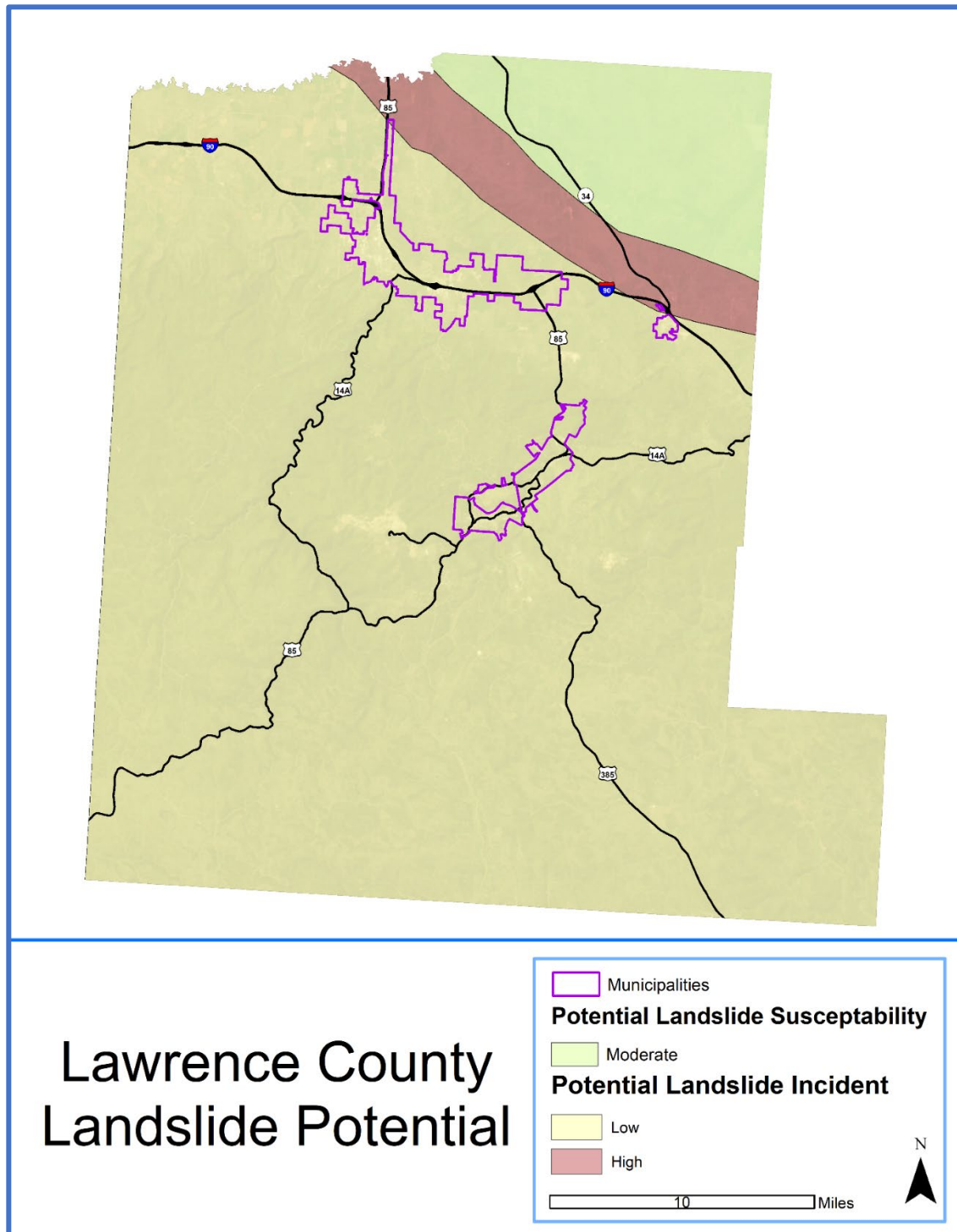


Figure 4.7: Landslide Potential Areas in Lawrence County. Radburch, Dorothy H, et al. 1982.

Landslides tend to occur after bouts of heavy rainfall or rapid snowmelt. Areas that have been impacted by wildfires have a higher probability of landslides due to the lack of vegetation to take in precipitation. Areas most prone to landslides are places where previous landslides have occurred, bases of steep slopes, bases of drainage channels, and developed hillsides using leach-field systems.²⁹ Climate variations have the potential to increase the likelihood of landslides. With heavy rain events being one of the causes for landslides, the projected increase of heavy rainfall can cause a higher likelihood of landslides, especially in areas with past occurrences.³⁰ The table below helps to demonstrate the different types of landslides.

Types of Landslides				
Type of Movement		Type of Material		
		Bedrock	Engineering Soils	
			Predominantly coarse	Predominantly fine
FALLS		Rock fall	Debris fall	Earth fall
TOPPLES		Rock topple	Debris topple	Earth topple
Slides	ROTATIONAL	Rock slide	Debris slide	Earth slide
	TRANSLATIONAL			
LATERAL SPREADS		Rock spread	Debris spread	Earth spread
FLOWS		Rock flow (deep creep)	Debris flow (soil creep)	Earth flow
Complex – combination of two or more principal types of movement				

Table 4.26. Types of Landslides. 2004 chart created from USGS. Landslide Types and Processes. Abbreviated version of Varnes' classification of slope movements 1978.

Lawrence County is susceptible to landslides, with higher potential in the northeastern part of the county. Historically, Lawrence County has experienced several mudslides. A major slide occurred in the 1970s causing damage and one fatality. In 2002, another mud slide occurred following the Grizzly Gulch Fire.³¹ Development in the Black Hills can be challenging in areas with steep slopes and unstable rock/soil types. Many properties in the county and incorporated communities, especially in Central City, Deadwood, and Lead require retaining walls.

Subsidence occurs when the ground shifts downward to a relative specific point. There are several types of subsidence such as dissolution of limestone, mining-induced, fault induced, isostatic rebound, extraction of natural gas, groundwater related, and seasonal effects. Nationally, it is estimated there are 17,000 square miles in 45 states that have been affected by subsidence events.³² Due to the unique nature and circumstances, such as geology, soil types, or human activity, the threshold makes it difficult to define a standard measurement. Certain geological formations and rock types which are more susceptible to water erosion have a high probability of experiencing subsidence. With the relationship between water and erosion, it is likely future climate conditions of more intense rain could play a role in events of subsidence. The map in figure 4.8 shows areas in Lawrence County with carbonate and evaporite rock formations, which may have higher potential to experience subsidence.

Along with naturally susceptible rock types, Lawrence County's rich history of mining has left the county with several abandoned mines, which may be susceptible to subsidence. Many of these mines date back to the last 1800's – early 1900s. Due to the time these areas were not formally recorded or properly remediated.

²⁹ State of South Dakota Enhanced Hazard Mitigation Plan. 2024

³⁰ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*.

³¹ Lawrence County Pre-Disaster Mitigation Plan 2019.

³² Water Resources Mission Area. Land Subsidence. USGS. 2019

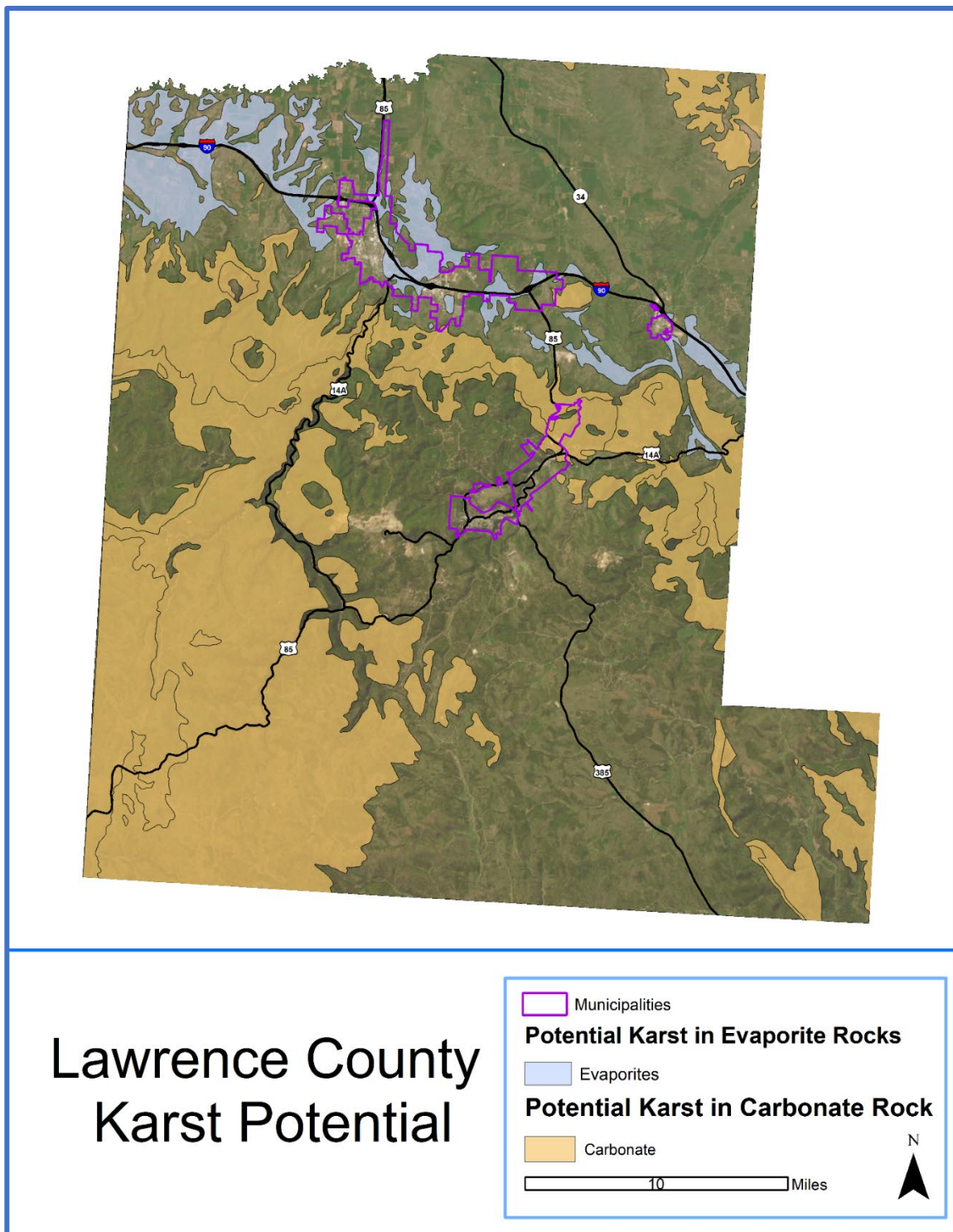


Figure 4.7: Karst Potential Areas in Lawrence County. USGS Geological Survey (2020)

Expansive Soils are soil types that swell and shrink depending on the moisture content. Structures built on these soils can experience damage such as shifting, cracking, and breaking due to the swelling and sinking of the soils, potentially causing troublesome, dangerous situations.³³ These types of soils are present in all states in the United States and can cause billions of dollars in damage each year.³⁴ Clay's expansive nature can cause permanent damage to structures and infrastructure over time, potentially causing troublesome, dangerous situations.³⁵

³³ State of South Dakota Enhanced Hazard Mitigation Plan. 2024

³⁴ Ibid. State of South Dakota Hazard Mitigation Plan.

³⁵ Cuelho, Eil, & Michelle Akin. 2020.

There are numerous testing methods that focus on gauging expansive soils. Generally, 10% swelling behavior is considered expansive. Soils classified as 'clayey' can also be considered expansive. Due to the nature of these soils, future climate variations can play an important role in the way these soils act. Future predictions of more intense precipitation and longer dry periods with increased heat will aid in the natural expanding and shrinking nature of these soils. ³⁶ Limited data was available for locations involving expansive soils. During public meetings and discussions with the county and cities expansive soil seems to be less prominent in Black Hills.

HIGH/SEVERE WIND

Future Hazard Probability	
Event Type	High/Severe Wind
Probability	High

Table 4.27. Probability of high wind occurrences. Calculations based on NOAA weather data. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

FEMA National Risk Index	
Strong Wind	Relatively High

High/Severe wind events are common in western South Dakota. High winds can occur anywhere in the county, but the foothills and plains tend to see higher winds. Several times a year, the residents of Lawrence County can expect to experience strong winds of more than 40 mph. Gusts of wind more than 80 mph have also been

recorded for the area. High wind history of Lawrence County can be found in Appendix B. It is currently unknown if predicted future weather conditions will have any effect on the intensity or frequency of severe winds. ³⁷

Beaufort Wind Chart – Estimating Wind Speeds				
Beaufort Number	MPH Range	MPH Average	Terminology	Description
0	0	0	Calm	Calm. Smoke rises vertically.
1	1-3	2	Light Air	Wind motion visible in smoke.
2	4-7	6	Light breeze	Wind felt on exposed skin. Leaves rustle.
3	8-12	11	Gentle breeze	Leaves and smaller twigs in constant motion.
4	13-18	15	Moderate breeze	Dust and loose paper is raised. Small branches begin to move.
5	19-24	22	Fresh breeze	Smaller trees sway.
6	25-31	27	Strong breeze	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult.
7	32-38	35	Near gale	Whole trees in motion. Some difficulty when walking into the wind.
8	39-46	42	Gale	Twigs broken from trees. Cars veer on road.
9	47-54	50	Severe gale	Light structure damage.
10	55-63	60	Storm	Trees uprooted. Considerable structural damage.
11	64-73	70	Violent Storm	Widespread structural damage.
12	74-95	90	Hurricane	Considerable and widespread damage to structures.

Table 4.28. Beaufort Wind Scale. NOAA. *Beaufort Wind Scale*.

³⁶ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*.

³⁷ State of South Dakota Enhanced Hazard Mitigation Plan. 2024

Significant Weather Events – High/Severe Wind	
Historic	➤ 11/12/2007 - Strong southwesterly winds developed during the evening over parts of the Black Hills and accelerated as they moved down the northern and eastern slopes of the Black Hills. Wind gusts were measured at 87 mph west of Spearfish and 95 mph southwest of Hermosa. Several mobile homes had their roofs blown off; power lines, light poles, and street signs were blown down or bent; and cargo trailers were swept off roads. ➤ 01/04/2008 - Strong southwesterly winds developed along the northern and eastern slopes of the Black Hills during the evening and continued overnight. The strongest winds were just south and west of Spearfish, where gusts exceeded 80 mph in the evening. A peak gust of 91 mph was recorded five miles west of Spearfish. ➤ 01/27/2008 – Strong southwesterly winds developed across the Black Hills during the afternoon and persisted through much of the night. Wind gusts of 60 to 70 mph were common across the higher terrain of the Black Hills and the northern and eastern foothills. The strongest winds were noted in the Spearfish and Hermosa areas, where a few gusts exceeded 90 mph.
Since 2019	➤ 11/13/2020 - Strong southwesterly winds developed in the late afternoon and evening across the northern Black Hills area ahead of an approaching cold front. Wind gusts to 70 mph were noted, with a few higher gusts in the Spearfish area. Some trees and power lines were downed, especially in the Spearfish area and the northern Black Hills. ➤ 03/29/2021 - A significant wind event occurred from the early morning through the late day. Strong west to southwest winds developed during the early morning hours across parts of the Black Hills and foothills, when gusts of 60 to over 70 mph were recorded. A strong cold front then moved through from northwest to southeast during the morning and early afternoon. Wind gusts of 60 to over 80 mph developed and persisted through the late day. The strong winds downed some trees and caused isolated power outages in the Black Hills. The winds also helped spread significant wildfires near Mount Rushmore and just west of Rapid City. ➤ 12/01/2022 - Strong southwest winds developed across portions of the Black Hills. The strongest winds developed during the early evening, especially in the Lead area, where some gusts of 60 to 75 mph were recorded.

Table 4.29. Significant weather events of high/severe winds in Lawrence County. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

SUMMER STORMS

Future Hazard Probability				
Event Type	Hail	Lightning*	Heavy Rain	Thunderstorm Winds
Probability	High	High	Med	High

Table 4.30. Probability of future summer storm occurrence. Calculations based on NOAA weather data. *It is likely that lightning was unreported. Fire data shows that several fires were caused by lightning strikes, and based on this information the probability is most likely 100%. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

FEMA National Risk Index	
Hail	Relatively Moderate
Lightning	Relatively Moderate

Summer storm occurrences in Lawrence County are common and can occur anywhere in the county. Thunderstorms in Lawrence County usually occur in the summer months but have occurred as early as April.

Summer storms in Lawrence County often are accompanied by bouts of hail. Hail occurrences are common in Lawrence County and a full history by location throughout the county can be found in Appendix B. Unfortunately, the total damages for each event are not available, but hopefully a method for collecting this data will evolve soon so that it can be made available to local governments for mitigation planning.

Hail Size	
Diameter	Size Comparison
$\frac{1}{4}$ inch	Pea
$\frac{1}{2}$ inch	Mothball, peanut, USB plug
$\frac{3}{4}$ inch	Penny
$\frac{7}{8}$ inch	Nichel
1 inch	Quarter
1 $\frac{1}{4}$ inches	Half dollar
1 $\frac{1}{2}$ inches	Ping pong ball
1 $\frac{3}{4}$ inches	Gold ball
2 inches	Lime or medium sized hen egg
2 $\frac{1}{2}$ inches	Tennis ball
2 $\frac{3}{4}$ inches	Baseball
3 inches	Large apple
4 inches	Softball
4 $\frac{1}{2}$ inches	Grapefruit

Table 4.31. NOAA. Estimating hail size.

The extent or severity of lightning can range from significant to insignificant depending on where it strikes and what structures are hit. Water towers, cell phone towers, power lines, trees, and common buildings and structures all have the possibility of being struck by lightning. Lightning strikes are also known to cause wildfires. Since lightning is common in this region of the United States and Lawrence County, it is evident that the information reported on the NOAA website is inaccurate and incomplete. Wildfire data shows that the source of ignition was lightning strikes.

Future weather predictions expect an increase in the intensity and frequency of storms. Warmer weather accompanied by wet conditions often leads to severe storms. With current models showing expected warmer temperatures and higher rates of evaporation, it is likely hail events will also increase. No information was found regarding how or if the size of hail would be impacted. ³⁸

The extent or severity of lightning can range from significant to insignificant depending on where it strikes and what structures are hit. Lightning has the potential to occur anywhere in the county. Water towers, cell phone towers, power lines, trees, and common buildings and structures all have the possibility of being struck by lightning. Lightning strikes are also known to cause wildfires. Since lightning is common in this region of the United States and Lawrence County, it is evident that the information reported on the NOAA website is inaccurate and incomplete. Wildfire data shows that the source of ignition was lightning strikes.

Lightning Activity Level	
Activity Level Scale	Description
LAL 1	No thunderstorms
LAL 2	Isolated thunderstorms. Light rain will occasionally reach the ground. Lightning is very infrequent, 1 to 5 cloud to ground strikes in a five-minutes period.
LAL 3	Widely scattered thunderstorms. Light to moderate rain will reach the ground. Lightning is infrequent, 6 to 10 cloud to ground strikes in a five-minute period
LAL 4	Scattered thunderstorms. Moderate rain is commonly produced. Lightning is frequent, 11 to 15 cloud to ground strikes in a five-minute period.
LAL 5	Numerous thunderstorms. Rainfall is moderate to heavy. Lightning is frequent and intense, greater than 15 cloud to ground strikes in a five-minute period.
LAL 6	Dry lightning (same as LAL 3 but without rain). This type of lightning has the potential for extreme fire activity and is normally highlighted in fire weather forecasts with a Red Flag warning.

Table 4.32. NOAA. LALs (L)ightning (A)ctivity (L)evels numbered 1 through 6.

³⁸ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*.

Significant Weather Events – Summer Storms	
Historic	Hail 3” or Greater • July 6, 1963 • June 24, 2011 (Cheyenne Crossing) • June 19, 2015 (St. Onge) • June 29, 2018 (Lead) • July 17, 2019 (Spearfish) ➤ 8/1/2000- An intense thunderstorm moved from northeastern Wyoming into the foothills of the northern Black Hills. Massive downburst winds estimated at 90 to 110 mph hit areas from eight miles west of Spearfish to several miles east of Spearfish. Hail to golf ball size accompanied the high winds and damaged roofs and siding throughout the region, although the winds caused the worst damage. In town, the intense winds shattered signs, blew over gas station awnings and the wind driven hail caused major damage to automotive and mobile home dealerships. A retirement home had a quarter of its roof torn off and a hotel had to evacuate all its guests as a portion of their roof was blown off. At least ten mobile homes were unlivable, and over 100 mobile homes had damage to siding, roofing and skirting. The airport at Spearfish had 27 planes damaged, and seven of those were destroyed beyond repair. Seven hangers at the airport were also damaged or destroyed. A massive number of trees in Spearfish were either snapped in half or completely knocked over, leaving many roads unpassable after the event. Roofing material sliced through an oxygen valve at the Spearfish Trout Farm and killed 100,000 out of 120,000 trout that the family raised. In the Spearfish city campground, more than 150 campers were there, in anticipation of the 60th Annual Sturgis Motorcycle Rally the following week. Over 100 trees were blown over and many people had camping equipment, vehicles or motorcycles damaged by the falling trees. None of the trees fell on occupied tents, although several fell within inches of where people were sleeping in their tents. 4 injuries were reported. One of the injuries required treatment at Rapid City Medical Center after someone was injured when his camper flipped over on the interstate. East of Spearfish, highway signs were blown over, large round bales of hay were blown several yards, and more trees were blown down or snapped off. Numerous outbuildings were also damaged, with debris scattered nearly a hundred yards downstream. In Sturgis, the damage was not as intense. Most of the damage occurred to tents that were set up by vendors selling merchandise for the motorcycle rally. The most critical injury of the entire event occurred in Sturgis when a vendor was trying to keep his tent from being blown away, and he was thrown into metal scaffolding. He was treated at the Rapid City Regional Hospital. As the storm moved to the southeast, high winds over 60 mph were reported for nearly 45 minutes between Sturgis and Rapid City. In Rapid City, the National Weather Service office measured wind gusts of 70 mph. The only damage reported were tree limbs down. The storm weakened as it moved southeast of Rapid City but was still at severe limits as it passed over the Badlands National Park and went southward into Bennett County. Observers in Martin reported 60 mph wind gusts. The storm dissipated before reaching Nebraska. (Damages reported: \$9.5M) ➤ 7/31/2011- A severe thunderstorm developed across the northern Black Hills and moved northward across the Spearfish area into southern Butte County. Large hail damaged vehicles and buildings in Spearfish. (Damages reported: \$2M) ➤ 5/17/2013- A thunderstorm intensified over Lawrence County during the late evening and moved east through Meade County. The storm produced golf ball size hail in Deadwood, which damaged many vehicles in town. Hail damaged many vehicles. (Damages reported: \$1.5M) ➤ 7/12/2015- A young man died, and another was injured when they were struck by lightning at the Spearfish Canyon Disk Golf Course.
Since 2018	➤ 6/29/2018- A long duration derecho tracked northeastward from Wyoming to the Black Hills area and across northwestern South Dakota. Wind gusts as high as 90 mph were reported across the area. Some trees and power poles were downed, along with mostly minor property damage. A woman was seriously injured from a tree falling on a camper at the Timon Campground. ➤ 6/6/2020- A tornadic thunderstorm tracked eastward into the northern Black Hills from Wyoming. An EF-1 tornado began in Wyoming and moved across west central Lawrence County into Spearfish Canyon before dissipating. Very large hail to baseball size fell from Lead and Deadwood to Tilford and Piedmont, causing significant damage. The storm continued to be severe as it moved farther east across west central South Dakota, producing wind gusts to 70 mph. Large hail caused significant property damage in Deadwood. The estimated damage to just public structures is 1.8 million dollars, with total damage in the city much higher. (Damages reported: \$2M)

Table 4.33. Significant weather events of summer storms Lawrence County. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

TORNADOS

Future Hazard Probability	
Event Type	Tornado
Probability	Med

Table 4.34. Probability of tornado occurrences. Calculations based on NOAA weather data. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

FEMA National Risk Index	
Tornado	Relatively Low

Fujita Damage Scale	
Prior to 2010	2010 - current
F0=winds less than 73 mph	EF0=unknown
F1=winds 73-112 mph	EF0=winds 65-85 mph
F2=winds 113-157 mph	EF1=winds 85-110 mph
F3=winds 158-206 mph	EF2=winds 111-135 mph
F4=winds 207-260 mph	EF3=winds 136-165 mph
F5=winds 261-318 mph	EF4=winds 166-200 mph
F6=winds greater than 318 mph	EF5=winds greater than

Table 4.35. Fujita Damage Scale.

All of Lawrence County is susceptible to summer storms which have the potential to form tornados. Warning time for summer storms is normally several hours, sufficient for relocation and evacuation if necessary. However, tornados may occur with little or no warning. It is often misunderstood that tornadoes occurring in Lawrence County are predominantly an open grassland or prairie phenomenon. However, tornados can and do occur across the county.

The *Climate Science Special Report* anticipates that overtime, the Northern Plains will see a high frequency of severe summer storm...³⁹ While there is no evidence to show the anticipated extent or intensity of storms in the region, it is currently unknown if the county will experience an increase of intensity or frequency of tornado events....⁴⁰

Significant Weather Events – Tornados	
Historic	➤ 05/22/1933 – A tornado in the Rochford-Mystic area injured 8 people and destroyed trees in a 6-mile long ½ mile wide path. ➤ 06/28/1947 – A storm spawned tornados from Broadus, MT to Philip, SD, the distance of 300 miles. One touched down in Spearfish and destroyed trees and buildings in a path a mile long. When the tornado came near Highway 14 several people were injured in automobiles. ➤ 08/1953 – a weak tornado touched down on both sides of Spearfish but did little damage. ➤ 07/12/1965 – F3- (Reported Damages: \$250,000) ➤ 06/16/2007 – EF1 - A tornado touched down on a ridge just north of Interstate 90 exit 17 and traveled eastward, lifting near Highway 34. It blew down several oak and cottonwood trees. ➤ 06/29/2018 – EF1- The total path length was almost 20 miles. An EF-1 tornado began in Wyoming and moved across west central Lawrence County into Spearfish Canyon before dissipating. The tornado snapped trees and caused minor structural damage. Very large hail to baseball size fell from Lead and Deadwood to Tilford and Piedmont, causing significant damage. The storm continued to be severe as it moved farther east across west central South Dakota, producing wind gusts to 70 mph.
Since 2019	➤ 07/06/2020 – EF2 - A tornado moved eastward from Wyoming over the Black Hills southwest of Lead for a total length of 7.4 miles. It tracked over forested and open terrain. Many trees were downed and snapped along its path, but no property damage was noted. ➤ 07/10/2020 – EF1 - The tornado tracked across forested terrain of the northern Black Hills for 15.5 miles, running through Spearfish Canyon. Many trees were snapped or uprooted along its path. Although the tornado itself did not cause property damage, trees were blown down onto houses and power lines.

Table 4.36. Significant weather events of tornados in Lawrence County. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

³⁹ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*.

⁴⁰ Ibid. USGCRP.

WILDFIRE

Future Hazard Probability	
Event Type	Wildfire
Probability	High

Table 4.37. Probability wildfire occurrences. Calculations based on Wildfire Interagency Fire Center data. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

FEMA National Risk Index	
Wildfire	Relatively Moderate

A majority of Lawrence County resides within the Black Hills National Forest. Roughly 2/3 of Lawrence County is comprised of forested lands primarily made up of Ponderosa pine, white spruce, and various hardwoods. (old plan) Compared to other counties in the United States, the county has an 81% higher risk of wildfire.⁴¹ However, wildfires can occur anywhere in the county.

The occurrence of major fire events is heightened when there is prolonged drought or severe storms affiliated with widespread tree damage. With a predicted decrease in precipitation and an expected higher frequency of drought conditions, the intensity and frequency of wildfire events are expected to increase.⁴² *Fire Factor* explained that the change in the risk over time is caused by several environmental factors, rising air temperatures, precipitation changes, and a decrease in humidity. Rising temperatures cause a higher rate of evaporation that leads to vegetation and soil drying more quickly, creating fuel for fires. Similarly, decreasing humidity can help increase the speed at which vegetation dries.⁴³ Future predictions call for longer spans without precipitation only exacerbate the risk creating more favorable environment for wildfires to occur more frequently.⁴⁴

Using the First Street Foundation Wildfire Model can help to determine the probability of a facility and community being directly or indirectly impacted by embers. Community risk also incorporates the impacts wildfire can have on infrastructure, emergency services, transportation, businesses, and finances of homeowners (Table 4.30). The risk is determined by using a relative ranking ranging from 1-minimal to 10-extreme. Minimal risk would indicate no wildfire risk. The risk represents the weighted number of facilities/properties with direct or indirect exposure to wildfires. The change in risk also considers the projected change in weather patterns over the next 30 years.⁴⁵

Lawrence County Fire Factor: Wildfire Risk	
Overall County	Major
Residential	Major
Commercial	Major
Critical Infrastructure	Major
Social Facilities	Major
Minimal Risk	Properties with a Fire Factor 1 (no risk)
Minor Risk	Properties with a Fire Factor 2 (less than a 1% chance of burning over 30 years)
Moderate Risk	Properties with a Fire Factor 3 or 4 (1%-6% chance of burning over 30 years)
Major Risk	Properties with a Fire Factor 5 or 6 (6%-14% chance of burning over 30 years)
Severe Risk	Properties with a Fire Factor 7 or 8 (14%-26% chance of burning over 30 years)
Extreme Risk	Properties with a Fire Factor 9 or 10 (more than 26% chance of burning over 30 years).

Table 4.38. Lawrence County Wildfire Risk over the next 30 years. (Risk Factor. 2023. *Fire Factor*).

⁴¹ USDA Forest Service. *Wildfire Risk to Communities: Lawrence County, SD Overview*

⁴² FEMA. 2022. *Mitigation Planning Policy Guide*. U.S. Department of Homeland Security.

⁴³ Risk Factor. 2025. *Fire Factor*.

⁴⁴ *State of South Dakota Hazard Mitigation Plan. 2024*

⁴⁵ Risk Factor. 2022. *How is my fire factor calculated?*

Wildfires are generally classified by class based on the total burned acres. Table 4.39 displays wildfire classes by acres burned.

Wildfire Size Classes	
Size	Class
<1 acres	Wildfire Class A
1-9.9 acres	Wildfire Class B
10-99 acres	Wildfire Class C
100-299 acres	Wildfire Class D
300-999 acres	Wildfire Class E
1,000-4,999 acres	Wildfire Class F
5,000-9,999 acres	Wildfire Class G
10,000-49,999 acres	Wildfire Class H
50,000-99,999 acres	Wildfire Class I

Table 4.39. Wildfire Classes. South Dakota Enhanced Mitigation Plan 2024.

According to NOAA, since 2000, only two wildfires were reported in Lawrence County, which is grossly underreported. To get a more complete picture of the wildfire impact in Lawrence County, data was compiled from the National Interagency Fire Center Historical Fires Open Data. This group produces data under the interagency Wildland Fire Data Program, hosted in the National Interagency Fire Center ArcGIS Online Organization.⁴⁶

A majority of the county is comprised of forested lands, these wildfire types can burn slower and last longer due to fuel types. Lawrence County’s historical wildfire data shows most natural hazard occurrences were on Federal Lands. Medium grasses, forbs, Ponderosa pine, and White spruce are the primary fuels in the county, but there is a large variety of vegetation throughout the Black Hills.⁴⁷ Most fires occur in the summer months, but wildfires can occur any time of the year. Major fire events are more likely to occur during or after conditions of prolonged drought, high winds, and widespread tree damage often caused by severe storms, and insect infestations. The magnitude of wildfires depends upon several different factors such as base fuel, terrain, and weather conditions. Table 4.40 shows the historical wildfires location and approximate acres burned from 2014 to 2022. Figure 4.8 shows a total of three wildfires from 1984 to 2022 with more than 1000 acres burned.

National Interagency Fire Center Wildfires May 2014 - December 2024	
Total Wildfires	363
Acres Burned	Total Wildfires
0-0.29 acres	198
0.3-9.9 acres	79
10-99.9 acres	30
100-299.9 acres	10
300-900.9 acres	12
1000-4999.9 acres	11
5000+ acres	0
Fire Size Not Reported	23

Table 4.40. National Interagency Fire Center Historic Data. Acres Burned: A measure of acres reported for the fire. More specifically, the number of acres within the current perimeter of a specific, individual incident, including unburned and unburnable islands. Minimum size must be 0.1. Accessed 12/27/2024 (Appendix B)

⁴⁶ Wildland Fire Interagency Geospatial Services. 2024. *Wildland Fire Locations*.

⁴⁷ Lawrence County Community Wildfire Protection Plan. 2022.

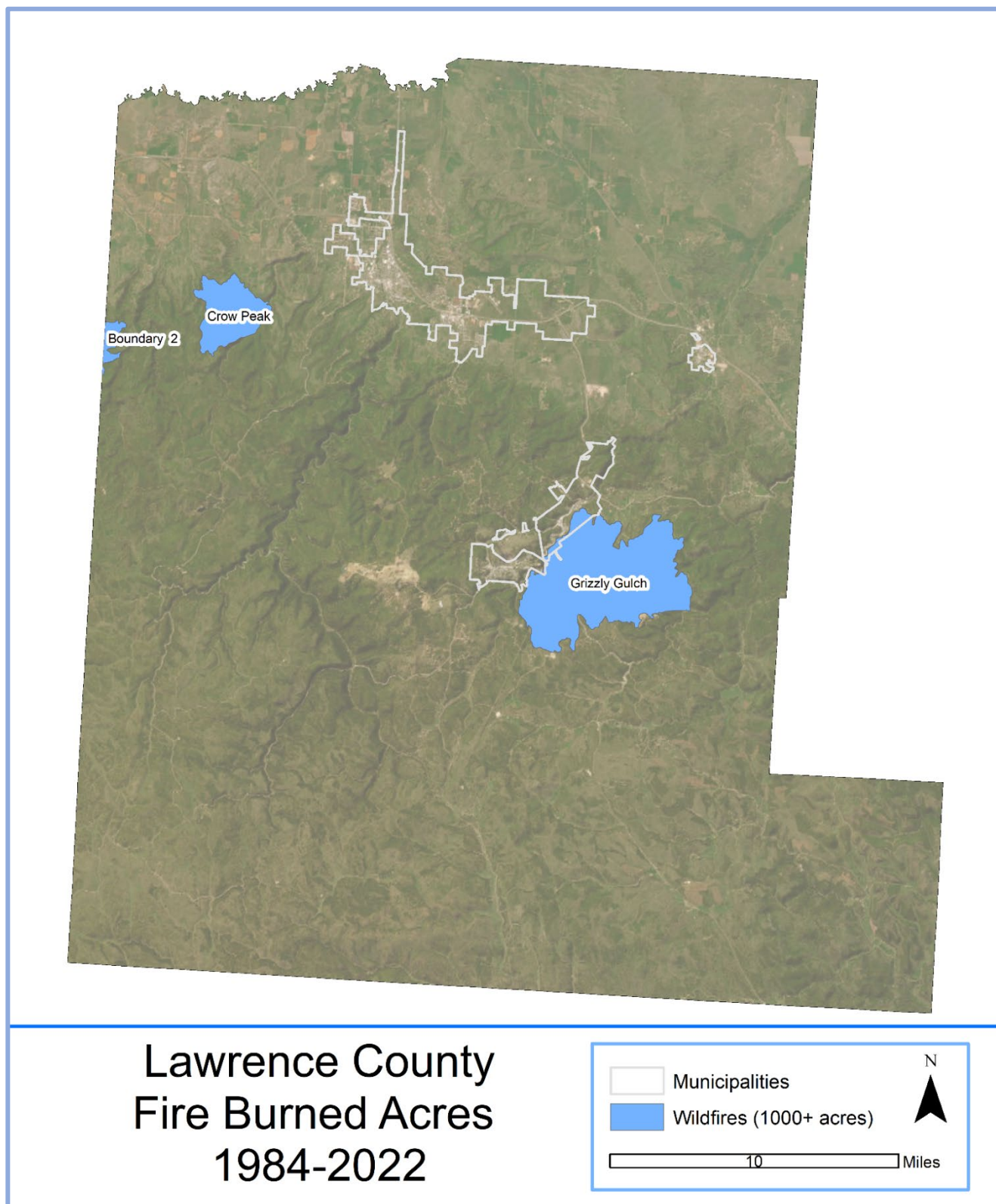


Figure 4.8: Lawrence County Large Fires.

The Community Wildfire Defense Grant Risk Dataset considered two variables for eligibility as an “at-risk community” based off the *Wildfire Risk to Communities*, created by the U.S. Forest Service. To be eligible for a community “risk to homes” percentile must be rated at least in the 40th – 70th range, with a priority to those communities in the 70th percentile or higher. In addition, the “wildfire hazard potential” must be in at least the 67th – 84th percentile range, with those in the 84th percentile or greater having a higher priority. Table 4.41 shows a list of eligibility of “at-risk communities” in Lawrence County.

“At-Risk Communities” Eligibility and Percentiles						
Community	Lawrence County	Central City	Deadwood	Lead	Spearfish	Whitewood
“At-Risk” Eligible	Yes	Yes	Yes	Yes	Yes	Yes
Wildfire Risk to Homes (State Rank)	94.9%	93.4%	95.7%	94.0%	92.4%	93.0%
Wildfire Hazard Potential (State Rank)	94.9%	93.4%	95.7%	94.0%	92.4%	93.0%

Table 4.41. Community Wildfire Defense Grant “At-Risk Communities” (Wildfire Risk to Communities)

The county's topography can influence the intensity and spread of wildland fires. South- and west-facing slopes tend to dry out more quickly, which can lead to earlier ignition of fuels. Approximately 5,203 acres in the county are located on slopes steeper than 30%, oriented to the south or west. These slopes influence heat transfer and alter weather patterns, generating localized conditions that affect how wildfires behave.⁴⁸ The topography of an area also plays an important role when mitigating the risk of wildfire. Slope, aspect, and features in an area will slow down or contribute to the spread of fire. Slope will determine how a fire moves up or down hills. If a fire were to start at the bottom of a slope, it would quickly spread upwards because of the contributing rising hot air.⁴⁹

Several factors can contribute to the frequency and intensity of wildfire including temperature, soil moisture, humidity, wind, and fuel types. Temperatures evaporate moisture at a high rate, which causes trees, shrubs, and grasses to dry up. Vegetation lacking water can become a target for insects and diseases. Dried up or dead plant life creates more fuel for fires. Climate variations may contribute to more destructive wildfires. The projected increase of temperatures may cause an increase in the size, frequency, and severity of wildfires.⁵⁰

Nationwide it is estimated the wildland-urban interface (WUI) has been growing by approximately 2 million acres annually. South Dakota ranges from 15%-30% of homes located within the WUI.⁵¹ The wildland-urban interface poses several challenges for land management, firefighting, and overall community safety. Acknowledging that conditions are constantly evolving, the Wildland-Urban Interface (WUI) expands alongside development, while the number of wildfires nationwide continues to rise. It's essential for us to adjust and adapt to the ongoing threat of wildfire. As development continues to encroach into these areas, the WUI becomes increasingly vulnerable to fire events, leading to increased risk to the loss of life, property, infrastructure, and natural ecosystems. Safety challenges also arise for firefighters which may face issues with steep terrain, dense vegetation, and lack of readily accessible water supplies. As urban populations continue to expand into these areas, the potential for devastating wildfire incidents increases, necessitating effective planning and mitigation strategies to protect both lives and property. It is recommended through the *International Urban Interface Code* that the WUI is reevaluated and updated on a 3-year basis. In 2022, Lawrence County completed an update of its Community Wildfire Protection Plan. This plan has identified the WUI treatment areas of half mile, one and half miles, and 3-miles.

The cities of Central City, Deadwood, Lead, Spearfish, and Whitewood, as well as some larger subdivision and the unincorporated community of St. Onge have pressurized water systems with hydrants. Many areas in the county are limited to dry hydrants, creeks, and dams.⁵² The *County's Community Wildfire Protection Plan* identifies 16 active water intakes which could be at risk in the event of a catastrophic wildfire.

⁴⁸ Lawrence County Pre-Disaster Mitigation. 2019

⁴⁹ National Park Service. 2023. *Wildland Fire Behavior*.

⁵⁰ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*.

⁵¹ U.S. Fire Administration. What is the WUI? 2022

⁵² Lawrence County CWPP. 2022.

USGS lists the potential effects from wildfire on water supplies [3]:

- Changes in magnitude and timing of snowmelt runoff, which influence filling of water-supply reservoirs.
- Increased sediment loading of water-supply reservoirs, shortened reservoir lifetime, and increased maintenance costs.
- Increased load of streams with nutrients, dissolved organic carbon.
- Post-fire erosion and transportation of sediment and debris to downstream water-treatment plants, water-supply reservoirs, and aquatic ecosystems.
- Increased turbidity (cloudiness caused by suspended material), or heightened iron and manganese concentrations, which may increase chemical treatment requirements and produce larger volumes of sludge, both of which would raise operating costs.
- Changes in source-water chemistry that can alter drinking-water treatment.

Watersheds are vulnerable during wildfires. Lawrence County has two major bedrock aquifers, the Madison and Minnelusa.⁵³ The recharge of these bedrock aquifers is highly reliant on healthy and reliable watersheds, which allow water to seep into the ground for recharge. The aftermath of wildfires, especially large fires, creates a loss of vegetation and changes in soil properties. This in turn can lead to changes in the natural flow of water, erosion, and eventually leads to post-fire pollutants reaching water bodies.⁵⁴ Overall, the impacts to a watershed depend on the wildfire behavior and hydrological features of the watershed.⁵⁵ Healthy forests are heavily reliant on maintaining healthy watersheds. As such it is important to ensure watersheds are protected from wildfire.

Lawrence County has 10 volunteer fire protection districts, all of which have mutual aid agreements. Surrounding VFD, state, and federal agencies can also be called on to assist if need be. Most of the fire crews are volunteers. Lawrence County, like most of the Black Hills area, is seeing a decrease in volunteer membership and limited funding. Due to this most departments are not staffed all the time, which creates longer response times in the event of an emergency. With limited funding many departments use older equipment and apparatuses.

Volunteer Fire Departments in Lawrence County	
Brownsville VFD	Spearfish VFD
Deadwood VFD	Spearfish Canyon VFD
Lead VFD	St. Onge VFD
Nemo VFD	Sturgis VFD
Rochford VFD	Whitewood VFD

Table 4.42. Lawrence County VFD

When mitigating the risk of wildfire, survivable space plays an important role. This creates a buffer between property or homes and the surrounding vegetation. Survivable space is necessary to protect areas when firefighters are unable to get to the scene immediately. This space can slow the spread of wildfire and allow firefighters the proper amount of room to safely extinguish a fire. Fires do not spread without a fuel source contributing to it. Fuel sources include grasses, shrubs, and trees so it is necessary to control the growth of these to reduce a wildfire's fuel source. Firewise practices can help reduce structural ignitability by reducing fuels in and around structures. Addressing wildfire strategies include resilient landscapes, fire-adapted communities, and safe and effective risk-based wildfire response.⁵⁶

There is potential for severe losses from wildfire with several factors come into play simultaneously, reduction of timber harvest, increased development of homes and subdivisions in forested areas, lack of water for firefighting, and lack of funds and volunteers to support local fire departments. In terms of wildfire mitigation in the Black Hills, there has been some disagreement on fire mitigation in the national forest as it relates to timber harvest. As of the update of this mitigation plan, the forest service is currently in the process of updating the Black Hills National Forest *Land and Resource Management Plan*. The USFS provided the following comments regarding changes to timber harvest for fuels mitigation:

⁵³ Ibid. Lawrence County CWPP.

⁵⁴ USGS. *Water Quality After Wildfire*. 2018

⁵⁵ Hohner, Amanda. *Wildfires Alter Forest Watersheds and Threaten Drinking Water*. 2019.

⁵⁶ USFA. *Post-wildfire recovery*. 2023

Many factors from the past have contributed to the current conditions of the Black Hills National Forest. Harvesting of timber in the past was geared toward mitigating impacts of wildfire and preventative thinning associated with mountain pine beetle infestations. These efforts along with natural disturbance have left the forest in a changed condition, with many areas having had the upper canopy trees aggressively thinned. The goal now is to continue harvesting in a fashion to maintain the forest in a healthy and fire adapted condition, where wildfire intensity can be mitigated, and containment can be more easily achieved. The previously mentioned disturbance agents of the forest have led to the proliferation of small diameter trees in the Black Hills on a large scale. The need for expanding management of small diameter understory trees is considered of the utmost importance to the Black Hills National Forest as they create hazardous conditions if not thinned. Emphasis will remain in wildland urban interfaces for thinning of small trees and management of surface fuels. Staffing and budgets can be limiting factors in these types of projects, but we pursue every opportunity we can for funding of this work.

"The idea of Firewise in pre-development for a community is that you plan before you build, which makes it cheaper to do things right. Planning ahead protects human life as well as structures."

Charlie Baun, National Firewise Protection Agency.
Environmental Conservation Services, Inc. Firewise
Landscape Inc. Safer from the Start.

Home hardening is an important part of wildfire mitigation, with the overall aim of making residential structures more resilient to the impact of wildfire. This process involves implementing various measures to reduce the vulnerability of homes to embers, radiant heat, and/or direct flames. Sealing vents and openings, along with installing spark arresters on chimneys, further enhance protection against embers. By prioritizing home hardening, residents can significantly lower the risk of ignition, ultimately safeguarding their homes and improving overall community resilience in the face of increasing wildfire threats.

To help address structural ignitability, utilizing the national FireWise program can help individuals and communities in reducing the likelihood of their property igniting due to wildfires. The program promotes FireWise practices on a community level and provides special recognition to communities that meet the Firewise criteria. The county and municipalities, and local VFD should coordinate to provide FireWise information to individual property owners. Lawrence County offers a 50/50 cost-share program. The program is designed that property/properties to be assessed for fire vulnerability. Following the assessment the property owner would be responsible for hiring a professional to perform necessary mitigation actions.

Mountain Pine Beetle (*Dendroctonus ponderosa*) can be found throughout the Black Hills; commonly impacting the ponderosa pine. A Black Hills native species, this beetle goes through 10-year cycles of increases and decreases in numbers. Years of high population increases tend to last about ten years. These beetles lead to the death of trees through two factors: tunneling beneath the bark and being carriers of a blue-stain fungus, which prohibits water movement from the roots to the needles of the tree. These beetles often colonize areas, creating a decline in forest health, a major contributor to wildfire risk.⁵⁷

One of the greatest challenges for wildfire mitigation projects is cross-boundary cooperation. Wildfire doesn't recognize jurisdictional boundaries, but oftentimes entities are limited in their ability to treat areas outside their boundaries. A new program is being rolled out by the USFS called the Potential Operational Delineations (PODs), which will help mitigate wildfire risk in a collaborative effort between jurisdictions. The program seeks to work with adjacent landowners and jurisdictions for cross-boundary planning. The program is designed to engage local wildfire experts, stakeholders, and scientists to help identify not only risk areas but to develop mitigation strategies and projects.⁵⁸

⁵⁷ South Dakota Department of Agriculture and Natural Resources. *Mountain Pine Beetle*.

⁵⁸ USDA. *PODs at a glance*.

WINTER STORMS

Future Hazard Probability				
Event Type	Blizzard	Heavy Snow	Winter Storm	Winter Weather
Probability	Med	High	High	High

Table 4.43. Probability of future winter storm occurrence. Calculations based on NOAA weather data. (NOAA: National Centers for Environmental Information. 2025. *Storm Events Database*).

FEMA National Risk Index	
Winter Weather	Relatively High

Winter storms usually take place from November until May. The snow and high winds created by winter storms often create hazardous driving conditions. While such storms would be considered extreme in many parts of the country, the consistent

nature of such weather hazards are expected in this area. Winter storms can occur anywhere in the county. Thus, planning and response mechanisms for blizzards, snow, and ice storms are vital and are routine procedures in Lawrence County due to the common nature of such storms.

Winter storms in South Dakota are known to cover large geographical areas. Often an entire county or multiple counties can be affected by a single storm. All the winter storm hazards, identified in Appendix B, were considered to have occurred countywide. Due to the multiple categories NOAA has for winter weather, the probability of winter storms combines several hazard events including blizzards, winter weather, winter storm, and heavy snow.

It is projected over time that winter storms throughout South Dakota will increase in frequency. The intensity of future events, however, is unknown.⁵⁹ Coverage of the Northern Great Plains has seen little to no overall change. The greatest trends seen since the 1960s have been an increase in snow in the fall and a decrease in the spring. Spring snow melt is important for water supply in the Northern Great Plains. However, since 1980 there has been a decline associated with warm springs in the area. Drier winters also lead to several issues such as drought and wildfire.⁶⁰

Information is being reported and recorded more accurately now than in previous decades, which is most likely a result of technology, internet, and a coordinated and focused effort to share information between agencies and local governments and to track weather and climate patterns.

Significant Weather Events – Winter Storms	
Historic	Snow (over 50" from single storm) • April 3-5, 1955 • March 14, 1973 • April 25-27 1984 • March 10-20, 1988 • April 4-7, 1997 • Feb 25-March 1, 1998 • April 19, 2000 • April 18-20, 2006 • May 1-2, 2008 • Nov 5-6, 2008 • Oct, 2013 ➤ 10/4/2005- A strong low-pressure system developed over the Central Rockies and moved through the Northern Plains, bringing heavy snow to much of the northern Black Hills and far northwest South Dakota. Precipitation started as rain during the day and changed over to snow during the late afternoon and early evening, mixed with freezing rain and sleet. Heavy snow fell during the night and ended in the morning.

⁵⁹ FEMA. *Assessing Future Conditions: Meeting FEMA's State Mitigation Plan Requirements*.

⁶⁰ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*.

	Snowfall amounts were generally in the 6-to-12-inch range, with locally heavier amounts across northern and western Harding County. The heavy, wet snow resulted in many downed trees, large branches, and power lines. This caused numerous power outages and some minor property damage. A few locations had some of the highest daily snowfall amounts ever recorded in October. Camp Crook received 12 inches of snow, which tied for the daily record for snow in October. Redig also tied its record for most snowfall in one day for October with 9 inches. Lemmon had its second highest daily total snowfall for October (6.5 inches). Bison received 6 inches, which was tied for the 3rd highest daily total in October. Spearfish tied for the 8th highest daily snow total for October with 7 inches. (Damaged Reported (\$250,000) ➤ 4/18/2006- A major spring storm moved across the Central and Northern Plains, bringing significant amounts of rain and snow and gusty winds to much of western South Dakota. Snowfall was heaviest across the northern and central Black Hills, as well as for northwest South Dakota, where 1 to 2 feet fell. Favored upslope areas of the northern Black Hills received 2 to 5 feet of snow. Strong northwest winds gusting to 60 mph, created blizzard conditions across Harding, Butte, and Lawrence counties. Drifts to 15 feet high were reported across Harding and Butte counties. Power poles and trees were downed by the combination of heavy wet snow and wind, which resulted in widespread and prolonged power outages across northwest South Dakota and the Black Hills. Interstate 90 was closed from Rapid City to the Wyoming border for more than 24 hours. 9Damaged Reported \$2M) ➤ 10/3/2013- A historic blizzard pounded western South Dakota with record-setting snowfall and strong winds for almost 48 hours from the evening of October 3 through the afternoon of October 5. One to two feet of snow was reported over the plains of western South Dakota, with three to five feet of snow falling over the northern and central Black Hills. Wind gusts to 70 mph across the plains produced significant blowing and drifting snow, with visibilities near zero for much of the day on October 4. The heavy wet snow and strong winds downed trees and power lines, causing prolonged outages and impassible highways. The roofs of several businesses, a middle school, and community center collapsed from the heavy snow. Thousands of livestock were killed from hypothermia, suffocation, or drowning. The South Dakota Animal Industry Board received reports of over 21,000 cattle; over 1300 sheep; 400 horses; and 40 bison deaths from the storm. Tree and debris removal costs were several million dollars.
Since 2019	➤ 11/30/2019 - An intense winter storm brought heavy snow and strong winds to western and south-central South Dakota. Snowfall amounts ranged from 5 to 10 inches across much of far southern South Dakota and the southern Black Hills to 10 to 20 inches across much of the northwest and west central South Dakota plains. Over the northern Black Hills, 15 to 30 inches of snow were recorded. Strong northwest winds over 50 mph produced significant blowing and drifting snow and blizzard conditions on the plains. Many highways were nearly impassible or closed, including Interstate 90. ➤ 12/10/2021 - A potent upper-level system tracked across the Black Hills and southern South Dakota, bringing a swath of heavy snow to much of these areas. The heaviest snow bands developed across far southern South Dakota, where ten to 20 inches was reported. Five to ten inches of snow accumulated across most of the Black Hills and west central South Dakota. Amounts tapered off significantly into northwestern South Dakota, where little or no snow was reported. ➤ 03/30/2023 - A quick moving, but potent, storm system brought snowfall to much of western and south-central South Dakota. The heaviest snow developed across portions of the central Black Hills and adjacent plains during the late night and early morning hours, where amounts of eight to 15 inches were reported over many of those areas. Elsewhere, amounts of four to nine inches were common, with amounts falling off across far northwestern South Dakota. Wind gusts over 50 mph developed on the back side of the system over the southwestern and south-central South Dakota plains, producing considerable blowing and drifting snow. Interstate 90 was closed east of the Black Hills for a period due to near blizzard conditions at times. ➤ 12/25/2023 - An intense low-pressure system developed over the central Plains and only slowly moved east-northeast across the region during the Christmas holiday period. Heavy snow developed from south-central South Dakota, west-northwest into the northern Black Hills area. Strong winds on the plains produced blowing snow and blizzard conditions at times across much of the southwest into central South Dakota plains. Snowfall amounts of 6 to 15 inches were noted over a good portion of southwest and south-central South Dakota and the northern Black Hills area, with locally higher amounts. Snowfall amounts tailed off quite a bit into northwest South Dakota, especially far northwest South Dakota. Amounts were also less in downslope favored areas of the eastern/southeastern Black Hills and adjacent plains. Travel was very difficult to near impossible in some areas, with Interstate 90 east of Rapid City closed for an extended period on December 26th into the 27th.

Table 4.44. Significant weather events of winter storms in Lawrence County. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

ASSESSING VULNERABILITY

VULNERABLE POPULATIONS

Requirement 201.6(c)(2)(ii)).. Does the plan include a summary of the jurisdiction's vulnerability and the impacts on the community from the identified hazards? Does this summary also address NFIP insured structures that have been repetitively damaged by floods?

B2-a. The plan must describe the vulnerability of each participant to the identified hazards. The description must include current and future assets and the risk that makes them susceptible to damage from the identified hazards.

Natural Hazards can take a hard toll on vulnerable populations such as the elderly, young children, impoverished, and disabled. Social vulnerability addresses the effects natural hazards can have on vulnerable and underserved populations. FEMA's National Risk Index scored social vulnerability in Lawrence County as relatively low. ⁶¹ From 2010 ⁶² to 2020 ⁶³, Lawrence County had a population increase of 7%. In 2020 and in 2010, the population density in Lawrence County was 93.8 persons per square mile. ⁶⁴

The 2021 American Community Survey shows the median age of 43 and an estimated 23.4% of residents are 65 years or older. ⁶⁵ It is estimated that 17.1% of residents have a disability including difficulties with hearing, vision, cognitive, ambulatory, self-care and/or independent living, with 15% being over 65. ⁶⁶ This percentage in Lawrence County is higher than the national average of 12.9%. ⁶⁷

Lawrence County Age	
Age	Percentage
Under 5 years old	3.8%
65 years and older	23.4%
75 years and older	8.9%

Table 4.45 U.S Census Bureau. 2022. (2022 American Community Survey. Age and Sex)

Young children and the elderly are more vulnerable to different natural hazards. Young children have a higher vulnerability to respiratory-related issues that can be caused by things such as wildfire smoke, airborne particles, and allergens. These can be associated with risks such as wildfires, high winds, and extreme temperatures. The immune systems of young children are also still developing, causing children to be more susceptible to disease. This risk can be caused by issues with public water

systems, compromised sanitation, and the spread of disease. ⁶⁸

Those individuals without a means of transportation can have difficulty in emergencies that may require evacuations, such as wildfire or flooding. They can also be limited in the ability to access emergency shelters that may be able to provide shelter and supplies during events such as summer and winter storms. ⁶⁹ Roughly 4.5% of residents of Lawrence County have no vehicle available. ⁷⁰

The median household income in Lawrence County is \$75,149 with a 10.8% poverty rate. ⁷¹ Poverty or lower income households are similarly vulnerable to those without vehicles. These individuals often require the most assistance during hazardous weather but lack the means or ability to get help. Additionally, those in poverty are less likely to have the means to take proactive measures to mitigate hazards. ⁷²

⁶¹ National Risk Index. *Social Vulnerability*.

⁶² U.S. Census Bureau. 2010. Table P1

⁶³ U.S. Census Bureau. 2020. Table P1

⁶⁴ U.S. Census Bureau 2020.

⁶⁵ U.S. Census Bureau. 2023. Age and Sex

⁶⁶ U.S. Census Bureau. 2023.

⁶⁷ Headwater Economics. 2025. *Populations at Risk*.

⁶⁸ Ibid. Headwater Economics.

⁶⁹ Headwater Economics. 2023. *A Profile of Wildfire Risk*.

⁷⁰ U.S. Census Bureau. 2023.

⁷¹ U.S. Census Bureau. 2023. Quick Facts

⁷² Ibid. Headwater Economics.

Lawrence County Demographic	
Race	Percentage
White	92.6%
Black	1.1%
Native American or Alaska Native	2.1%
Asian	1.5%
Native Hawaiian and other Pacific Islander	0.1%
Two or more races	2.6%

Table 4.46 Population and Race demographics of Lawrence County, South Dakota. (U.S. Census Bureau Decennial Census 2020).

Headwater's *Populations at Risk* report explained that minority populations tend to have more vulnerability to disasters and extreme temperatures. Barriers in language, culture, quality of housing, community isolation, and housing patterns can be attributed to these vulnerabilities. Natural disasters can result in negative impacts on the environment, which can lead to situations that can affect the health of the population. Some races have an increased risk of poorer health outcomes. ⁷³

In 2021, Lawrence County had roughly 12.5% of housing classified as mobile homes, compared to the national percentage of 5.2%. Headwater Economics reports that mobile homes are more susceptible to damage and injury caused by extreme weather events. ⁷⁴ Mobile/Manufactured homes built before June 15, 1976, regardless of modification, do not meet HUD standards. ⁷⁵

ASSESSING VULNERABILITY: OVERVIEW

The following paragraphs summarize the description of the jurisdiction's vulnerability to each hazard and the impact of each hazard on the jurisdiction. Most hazards have the potential to occur anywhere in the county. Hazards unique to the participating municipalities can be found in the unique and varied risk section of this Plan.

Blizzards are characterized by high winds, blowing snow, cold temperatures, and low visibility. Blizzards create conditions such as icy roads, closed roads, downed power lines and trees. Lawrence County's population is especially vulnerable to these conditions because people tend to leave their homes to get places such as work, school, and stores rather than staying inside. Traffic is one of the biggest hazards in Lawrence County during a blizzard because people often get stuck, stranded, and lost when driving their vehicles, which usually prompts others such as family and or emergency responders to go out in the conditions to rescue them.

Dam Failure can be caused by overtopping, foundation defects, cracking, inadequate maintenance and upkeep, and piping. Most dams in Lawrence County are in areas where if a failure occurs, there would be little damage to property. High-risk dams have the risk of not only property damage, but more importantly loss of life. The classification is based on the potential of downstream consequences of the dam failing, not the condition of the dam. It is due to this reason that these dams are required to have an emergency action plan in the event of a failure. In addition, there is a requirement by the state of South Dakota that all high-risk dams are inspected every five years. Vulnerable populations would be those with potential to be impacted by the downstream hazard, such as homeowners or travelers on roadways.

Drought can be defined as a period of prolonged lack of moisture. High temperatures, high winds, and low relative humidity all impact drought conditions. A decrease in the amount of precipitation can adversely affect stream flows and reservoirs, lakes, and groundwater levels. With the lower levels of moisture caused by drought, the chance of wildfire increases. Drought can also impact many factors, both directly and indirectly. These factors include higher water and food prices, water restrictions, air and water quality, and restricted access to recreational areas. ⁷⁶ Water shortages can affect supplies for domestic, municipal, industrial, agricultural, and recreational uses. Crops and other vegetation are harmed when moisture is not present within the soil. South Dakota's economy is closely tied to agriculture and only magnifies the potential loss, which could be suffered by the state's economy during drought

⁷³ Headwater Economics. 2025. *Populations at Risk*.

⁷⁴ Ibid. Headwater Economics.

⁷⁵ U.S. Department of Housing and Urban Development. *FAQ*. 2023.

⁷⁶ *State of South Dakota Drought Mitigation Plan*. 2015

conditions. The agriculture sector is severely affected by the lack of vegetation and water for livestock. Crop and pasture yields can be greatly diminished during periods of drought.

Drought conditions can also be harmful for vulnerable populations such as the elderly, young children, and those with medical conditions such as respiratory conditions, which are often exacerbated by increased dust. The CDC states that long-term health problems can occur due to poor quality drinking water and the impacts from poor air quality, sanitation hygiene, and food and nutrition.⁷⁷

If drought conditions in the region continue to increase, there will most likely be an increased demand for water and energy resources. As a result, the region may see the constraint of development, stress on natural resources, and increased competition for water.⁷⁸ The degree of impact depends on the length of a drought period. The longer the drought period, the higher degree of impact the land will experience. This can lead to the depletion of reservoirs and the decline of groundwater basin water levels.⁷⁹ Drought conditions lower the recharge of the aquifers.⁸⁰

Earthquakes occur in the area. The magnitude and intensity of an earthquake is measured by the Richter scale and the Mercalli scale. Earthquakes are not a common occurrence; a large earthquake would impact Lawrence County in comparable ways to anywhere else. Populations residing in substandard structures are affected by the damage to homes or structures. Those with disabilities may have issues reaching a safe location in the event of an earthquake. Earthquakes could also impact the economy, especially if critical or commercial businesses were damaged due to earthquakes.

Expansive Soils are in Lawrence County. The expanding and shrinking of soils can cause damage to structures. Often foundations, floors, and basements are damaged, but all areas of a structure can be affected. This hazard often occurs over long periods of time as soil expands and shrinks repeatedly. Damage from expansive soils can often be mistaken as natural aging damage of structures. Populations of lower income or below poverty level may have difficulty in costly repairs to homes harmed by this hazard. Additionally, renters may find themselves displaced due to damage to rental properties or during repairs.

Extreme Cold temperatures often accompany a winter storm, leaving people to cope with power failures and icy roads. When temperatures drop below normal and wind speed increases, heat can leave your body more rapidly. These weather-related conditions may lead to serious health problems. Extreme cold is a dangerous situation that can bring on health emergencies for susceptible people, such as those without shelter or who are stranded, or who live in a home that is poorly insulated or without heat. Exposure is the biggest threat/vulnerability to human life; however, incidences of exposure are isolated and thus unlikely to happen. During the stakeholders meeting it was discussed that the elderly can be greatly affected by extreme temperatures.

Extreme Heat has caused worldwide catastrophic crop damage, thousands of deaths from hyperthermia, and widespread power failures due to increased use of air conditioning. Loss of power and crop and livestock damage are the largest vulnerability to the county during times of extreme heat. Extreme heat can also greatly affect those individuals who work primarily outdoors.⁸¹

Flooding can result in injuries and even loss of life when fast flowing water is involved. Six inches of moving water is enough to sweep a vehicle off a road. Disruption of communication, transportation, electric service, and community services, along with contamination of water supplies and transportation accidents are very possible. Flooding can also have an impact on low-income families or those below the poverty level. Flooding damage can be extremely costly, not only for homeowners but renters could find themselves greatly affected financially or even displaced.

⁷⁷ Center for Disease Control and Prevention. *Health implications of drought*. 2020

⁷⁸ USGCRP, *Climate Science Special Report: Fourth National Climate Assessment, Volume 1*

⁷⁹ *State of South Dakota Drought Mitigation Plan*. 2015

⁸⁰ Driscoll et. al. *Hydrology of the Black Hills area, South Dakota*

⁸¹ Headwater Economics. 2025. *Populations at Risk*.

Freezing Rain/Ice Storms may cause build up on power lines, poles, trees, and structures. The additional weight can often cause weak structures to cave in and cause tree branches and power lines to break and fall. Lawrence County and the local jurisdictions are susceptible to these conditions due to the types of structures and surfaces that exist in the county that cannot be protected from freezing rain. Traffic on the roads and highways tend to be the biggest hazard during freezing rain conditions because vehicles often slide off the road, which prompts emergency responders and others to go out on rescue missions in adverse conditions.

Hail causes damage to property such as crops, vehicles, windows, roofs, and structures. Lawrence County and its local jurisdictions are vulnerable to hail, like most other areas in South Dakota, due to the nature of the hazard. Mitigating hail is difficult and is usually found in the form of insurance policies for structures, vehicles, and crops. Hail damage can have a large impact on lower income families and those below poverty levels, who may have limited insurance policies for such damage or are unable to afford building structures that are more hail resistant. Renters may also find themselves temporarily displaced during times of repair or permanent damage.

Heavy Rain can cause damage to property such as homes and roads. Heavy rain in Lawrence County can cause road inundations in low-lying areas. Roads and bridges can be washed out, thus causing traffic hazards for travelers and commuters. All areas of the county are vulnerable when heavy rain occurs. Storm sewers are built for the typical storm and therefore do not accommodate excessive or heavy rains.

High/Severe Wind can cause damage to property, injury, or death. High winds can cause downing of trees and powerlines, buildings to collapse, and flying debris. Western South Dakota is susceptible to high wind events. High wind warning is issued for sustained winds reaching 40mph or greater, or if gusts of 58 mph or greater are predicted. The most mentioned impacts from high winds by survey takers and stakeholders were damage to structures and trees. Some structures, such as mobile homes, are also susceptible to high/severe winds.

Ice Jams cause damage to bridges, roads, and culverts due to water currents pushing large chunks of ice under or through small openings.

Landslides are caused by the movement of earth downslope. Areas where old landslides have occurred often include steep slopes, bases of drainage channels, and developed hillsides. Landslides that occur in developed areas can cause damage to property and infrastructure, and injury or loss of life.

Lightning often strikes the tallest objects within the area. Most injuries from lightning occur near the end of thunderstorms. Individuals who sought shelter leave those areas prior to the entire completion of the thunderstorm. Believing it is safe to freely move around, lightning strikes catch them off guard. In towns, trees and poles often receive the most strikes. In rural areas, shorter objects are more vulnerable to being struck. Electrical lines and poles are also vulnerable because of their height and charge. In addition, many streetlights function with sensors. Since thunderstorms occur primarily during hours of darkness, lightning strikes close to censored lights cause the lights to go out, causing a potential hazard for drivers. Flickering lights and short blackouts are not at all uncommon in the county. One of lightning's dangerous attributes includes the ability to cause fires. The entire county is vulnerable to lightning strikes and subsequent fires.

Severe Winter Storms have a high risk of occurrence. Heavy snow can immobilize transportation, down power lines and trees, and cause the collapse of weaker structures. Livestock and wildlife are also very vulnerable during periods of heavy snow. Most storms can be considered to have occurred countywide. Due to the multiple occurrences of winter storms each year, an exhaustive compilation is not possible. The greatest danger during winter weather is traveling. Many individuals venture out in inclement weather. Reasons include the necessity of getting to work, going to school, going out just to see how the weather is, and to rescue stranded people. Vulnerable populations such as those with disabilities, the young or elderly, can be negatively impacted by factors such as loss of power related to heating or powering medical devices. These populations may also have difficulty reaching or receiving medical assistance due to limited travel abilities during storms.

Subsidence is a hazard that has a high probability of occurring in localized areas, but overall, a low probability of occurring in a majority of a county. Subsidence can cause damage to property, structures, infrastructures, and loss of life.

Thunderstorms cause lightning and large amounts of rain in a small timeframe. The entire county experiences thunderstorms on a regular basis and is only vulnerable when weather events outside the norm occur. Specific vulnerabilities are further identified in the paragraphs for “Lightning” and “Heavy Rains”.

Tornados present significant danger and occur most often in South Dakota during the months of May, June, and July. The greatest period of tornado activity, about 82% of occurrence, is from 11 am to midnight. Within this time frame, most tornados occur between 4 pm and 6 pm. Often associated with summer storms there are utility problems. Electric services have historically buried powerlines in the county. When evaluating new methods of warning systems, the county and towns should evaluate that warning systems consider different vulnerable populations, such as those without access to technology, language barriers, and cognitive disabilities.

Wildfires occur primarily during drought conditions but can occur with as little as one to two weeks with hot, dry, and windy weather conditions any time of year. Wildfires can cause extensive damage, both to property and human life, and can occur anywhere in the county. There can be large losses to standing timber, with the threat of erosion and debris buildup from rapid run-off in areas burned. There is potential for loss of life, structures, and utility infrastructure, as well as impacts upon economic factors such as ranching. Even though wildfires can have various beneficial effects on wilderness areas for plant species that are dependent on the effects of fire for growth and reproduction, large wildfires often have detrimental atmospheric consequences, and too frequently wildfires may cause other negative ecological impacts. Moisture amounts have the biggest impact on fire situations. During wet years, fire danger is generally lower. More controlled burns are conducted and less mishaps occur.

The *South Dakota Forest Action Plan Priority Areas* show high priority rankings for the riparian areas in Lawrence County.⁸² Wildfires can impact riparian areas either directly or indirectly. Riparian areas serve as critical habitats for plant and animal species. Wildfire can destroy or alter these important habits. Wildfire can directly impact an area from the burning of vegetation, water temperatures, water quality from erosion and sedimentation entering the system. Wildfire can also create impact indirectly by altering the hydrology of the surrounding area.⁸³

Wildfire smoke, which is a combination of gases and particles from burned materials, can affect anyone, but those at an increased risk are those with asthma, chronic obstructive pulmonary disease, heart disease, children, pregnant woman, and responders.⁸⁴ During younger children’s development stages, they are more sensitive to health problems and environmental stress. Those with poor health during childhood are more likely to see continued issues into adulthood. As an example, children have faster breathing rates than adults and tend to spend more time outdoors, causing a higher sensitivity to wildfire smoke. Older adults, those 65 and older, are also at a high risk from air pollutants, such as dust and particle matter. The poor air quality that is present during wildfire events creates a vulnerability to these individuals.⁸⁵

The ability for evacuation during emergencies can affect populations such as the elderly and those with certain pre-existing medical conditions, compromised mobility, and compromised language and cultural barriers. These conditions make it harder to interact with agencies. There is the potential for miscommunication, inability to follow directions.⁸⁶

Current techniques may permit and even encourage fires in some regions as a means of minimizing or removing sources of fuel from any wildfire that might develop. Local, state, and federal fire agencies are making efforts to

⁸² *South Dakota Forest Action Plan*. 2020. South Dakota.

⁸³ DeBano, Leonard F. et al. 1996. *Effects on Fire on Riparian Systems*.

⁸⁴ National Center for Environmental Health. 2022. *Protect yourself from wildfire smoke*.

⁸⁵ Headwaters Economics. 2025. *Populations at Risk*.

⁸⁶ Headwaters Economics. 2025. *Populations at Risk*.

work together to identify areas of treatment. South Dakota Wildland Fire works with all agencies in tracking different projects that take place in the region.

ADDRESSING VULNERABILITY: REPETITIVE LOSS PROPERTIES

Requirement 201.6(c)(2)(ii)... Does the plan include a summary of the jurisdiction's vulnerability and the impacts on the community from the identified hazards? Does this summary also address NFIP insured structures that have been repetitively damaged by floods?

B2-c. The plan must address repetitively flooded NFIP-insured structures by including the estimated numbers and types (residential, commercial, institutional, etc.) of repetitive/severe repetitive loss properties.

Repetitive loss properties are those for which two or more losses of at least \$1,000 each have been paid under the National Flood Insurance Program (NFIP) within any 10-year period since 1978. Neither Lawrence County nor any of the municipalities have had any severe repetitive loss properties.

NFIP Participants Policy Information				
	Policy in Force	Insurance in Force	Paid Losses	Total Paid Losses
Lawrence County	16	\$4,139,000	15	\$64,704.17
Central City	0	0	0	0
Deadwood	8	\$2,526,000	6	\$8248.12
Lead	3	\$480,000	0	0
Spearfish	42	\$9,949,000	19	\$206,264.43
Whitewood	0	0	0	0

Table 4.47 Lawrence County NFIP Policy Information.

Repetitive Losses			
	Number of Buildings	Losses	Payment Total
Lawrence County	1	1	\$1,238.88
Central City	0	0	0
Deadwood	0	0	0
Lead	0	0	0
Spearfish	0	0	0
Whitewood	0	0	0

Table 4.48 Lawrence County Repetitive Loss Information.

ASSESSING VULNERABILITY: IDENTIFYING STRUCTURES

Requirement 201.6(c)(2)(ii)... Does the plan include a summary of the jurisdiction's vulnerability and the impacts on the community from the identified hazards? Does this summary also address NFIP insured structures that have been repetitively damaged by floods?

B2-b. The plan must describe the potential impacts on each participating jurisdiction and its identified assets.

One of the purposes of this Plan is identifying critical facilities and determining to what extent these structures are vulnerable to natural hazards. In the event of a disaster, Lawrence County and participating entities want to ensure they could prevent further loss of life by generator powered critical facilities and shelters. Tables 4.49-4.54 inventory a list of assets for each community including critical facilities, vulnerable populations, economic assets, and historic assets that

would cause the greatest distress if destruction occurred. The participants were asked to think of structures that would cause the most devastation to their communities if the structures were to be lost in a natural hazard event, "In other words, list those structures that you cannot live/operate without." Plan participants were then instructed to determine the value of those structures. Most of the values provided are the insured values from the insurance policies. The Plan author acknowledges that determining what is "critical" can mean something different to every

community and that the information provided in the table is not comprehensive. Lawrence County's bridges and culverts were mentioned as critical infrastructure but are not listed in their entirety. These records are kept with the South Dakota Department of Transportation. Additionally, bridge inspections take place once a year and are reported to the South Dakota Department of Transportation.

Lawrence County was asked to identify critical facilities vulnerable to natural hazards and future hazards due to climate variations. Most facilities share the same risk for most all hazards apart from more localized hazards such as flooding, dam failure and certain geological hazards. The County explained that there were no localized hazards that make these assets more vulnerable than any other hazard such as summer storms, winter storms, etc...

Lawrence County Inventory Assets								
Name of Asset	Critical Facility	Vulnerable Pop.	Economic	Historic	Size (sq ft)	Replacement Value	Content Value	Notes
Lawrence County Courthouse w/ 15kw generator	☒			☒	22,680			Floodplain
Administrative Office Building	☒			☒				Floodplain
Maintenance Building (Pine St.)	☒							
Maintenance Building (Sherman St.)	☒							
Material Storage Buildings	☒							Floodplain
Sherriff Office, Jail w/ 65kw generator	☒	☒			18,060			Floodplain
Sherriff Evidence Storage	☒							
Highway Dept Office & Shop	☒							
Search & Rescue Building w/ generator	☒							
Equipment Storage Building	☒							
Highway Shop Building	☒							
Storage & Shop (N of Spearfish)	☒							
Tower Building	☒							
100' Communication Tower & Building	☒							
Tower & Building (Near Whitewood)	☒							
Tower & Building (Near Central City)	☒							
Terry Peak Communication Tower + Building	☒							
HMC Communication Tower + Building	☒							
Emergency Management Generator (Portable)	☒	☒	☒	☒				100 Kw

Table 4.49 Critical infrastructure for Lawrence County as of 2023. Information was provided by Lawrence County and 2019 PDM.

Central City was also asked to identify critical facilities vulnerable to natural hazards and future hazards due to climate variations. Most facilities share the same risk for most all hazards except for more localized hazards such as flooding and certain geological hazards. Assets with specific hazard risk are addressed in the 'notes' section of this plan table 4.50.

Central City Inventory Assets								
Name of Asset	Critical Facility	Vulnerable Pop.	Economic	Historic	Size (sq ft)	Replacement Value	Content Value	Notes
City Hall	☒				320	\$65,100	\$10,900	
Maintenance Shop	☒				1,800	\$111,200	\$150,000	

Table 4.50 Critical infrastructure for the City of Central City as of 2023. Information was provided by Deadwood.

Deadwood was also asked to identify critical facilities vulnerable to natural hazards and future hazards due to climate variations. Most facilities share the same risk for all hazards except for more localized hazards such as flooding and certain geological hazards. Deadwood has a rich history which is deeply ingrained in the community and serves as a major driving force to the community's economy. Due to Deadwood's historical heritage and designation as a national historic landmark, there are numerous listed assets that could impact the community if damaged or lost because of natural hazards. Assets located within the floodplain which are addressed in the 'notes' section of this plan table 4.51.

City of Deadwood Inventory Assets								
Name of Asset	Critical Facility	Vulnerable Pop.	Economic	Historic	Size (sq ft)	Replacement Value	Content Value	Notes
Deadwood Recreation Center	☒				22,944	7,053,330	\$249,243	
Days of 76 Museum			☒	☒	28,778	\$5,693,420	\$56,994	
Water Supply and System	☒				-	\$2,859,646	\$510,398	
Mt. Moriah Info Booth and Restroom			☒		470	\$75,903	\$1,676	
Gift Shop			☒			\$187,921		
Rain Shelter		☒				\$11,415		
Welcome Center Building			☒		9,246	\$4,107,540	\$675,530	

Trolley Barn			☒		3,654	\$142,616	\$15,676	
Broadway Parking Ramp			☒		141,104	\$5,979,742	\$28,512	
Interp. Center			☒		4,210	\$1,211,662	\$165,368	
Library			☒	☒	3,632	\$2,034,156	\$1,628,731	
Parks Shop			☒		3,948	\$232,843	\$43,543	Floodplain
Restrooms (125 Sherman St.)					240	\$46,730		
Adams House Gift Shop			☒	☒	1,206	\$207,785		
Adams Museum House			☒	☒	4,124	\$1,989,206	\$257,922	
Ticket Booth (Rodeo Grounds)					576	\$76,798		
Announcers Booth (Rodeo Grounds)			☒		200	\$17,407		
City Hall	☒				12,320	\$3,083,464	\$1,368,561	
City Shop	☒				13,500	\$1,033,110	\$92,839	Floodplain
City Storage Building	☒				7,7762	\$243,082	\$17,108	Floodplain
Fence, Scoreboard,. Lights (N. Baseball Field)						\$195,349		
Fence, Scoreboard,. Lights (S. Baseball Field)						\$228,415		
Furgeson Field Building					5,519	\$734,402		
Fire Station	☒				8,731	\$1,151,256	\$36,578	Floodplain
Grandstands and Concession Stand Rodeo Grounds			☒		22,500	\$2,742,811	\$209,577	Floodplain
Grandstand and Concession Stand Furgeson Field			☒		3,840	\$402,916		Floodplain
HARCC Building					14,664	\$3,031,043		
Adams Museum			☒	☒	3,535	\$2,165,04	\$52,256	
Storage Building (Oak Ridge Cemetery)					400	\$32,582	\$1,676	
Outlaw Square			☒			\$2,103,884	\$117,184	
Outlaw Square Gazebo			☒			\$275,266	\$5,132	
Restroom/Concession Stand (Ball Park)					932	\$135,384	\$11,405	
Storage Building (Ball Park)						\$32,582		Floodplain
VIP Concession (Rodeo Grounds)			☒		672	\$67,694		Floodplain
VIP Grandstands (Rodeo Grounds)			☒		2,250	\$338,746		
Warning Siren (City Shop)	☒					\$24,520		
Warning Siren (McGovern Hill)	☒					\$24,520		
Playground Equipment (Gordon Park)						\$171,070		
Restrooms (418 Cliff Street)					750	\$227,917		
Bridge (501 Main Street)	☒					\$128,361		
Picnic Shelter (Charles Steet)						\$5,675		

Playground Equipment (Charles Street)						\$36,595		
South Picnic Shelter (Sherman Street)						\$7,083		
Streetlights (Historically Accurate)				☒		\$1,698,639		*Some located in Floodplain

Table 4.51 Critical infrastructure for the City of Deadwood as of 2023. Information was provided by Deadwood.

Lead was also asked to identify critical facilities vulnerable to natural hazards and future hazards due to climate variations. Most facilities share the same risk for all hazards except for more localized hazards such as flooding and certain geological hazards. Lead is a historic mining community with a large underground mine that sits below most of the city, and development that occurred on mountainous terrain. Due to the city's topography, many of the community assets are held up by retaining walls, not only structures but also roads, utilities, sewer, and water lines. Assets located with specific hazard risk are addressed in the 'notes' section of this plan table 4.52.

City of Lead Inventory Assets								
Name of Asset	Critical Facility	Vulnerable Pop.	Economic	Historic	Size (sq ft)	Replacement Value	Content Value	Notes
City Hall & Equipment Storage	☒				16,281	\$2,235,027	\$912,852	
Warning Siren – City Hall	☒				NA	\$26,002	NA	
City Shop	☒				6,670	\$634,250	\$322,500	
Library		☒			8,277	\$1,484,738	\$789,399	
Tank & Controls (loc 10-16)	☒				84	\$200,000	\$48,000	
Pump House (loc 11-17)	☒				330	\$38,000	\$240,000	
Tank & Pump House (loc 12-18)	☒				130	\$520,000	\$154,000	
Water Tank (loc 13-19)	☒				800	\$460,000	\$23,000	
Pump House (loc 15-21)	☒				300	\$38,000	\$296,000	
Parks Dept Garage	☒				440	\$24,472	\$11,841	
Hearst Water Tank System & Control	☒				NA	\$847,500	\$15,000	
Booster Station (loc 18-27B)	☒				NA	\$13,000	\$70,000	

Table 4.52 Critical infrastructure for the City of Lead as of 2023. Information was provided by Lead and 2019 PDM.

Spearfish identify critical facilities vulnerable to natural hazards and future hazards due to climate variations. Most facilities share the same risk for all hazards except for more localized hazards such as flooding and certain geological hazards. Assets located within specific hazard areas are addressed in the ‘notes’ section of this plan table 4.53.

City of Spearfish Inventory Assets								
Name of Asset	Critical Facility	Vulnerable Pop.	Economic	Historic	Size (sq ft)	Replacement Value	Content Value	Notes
City Hall/Police/Library	☒				36,165			
City maintenance Office & Shop	☒				7,200			
Salt Storage Building at Shop Complex	☒				1,600			
Park Maintenance Shop	☒				2,800			
Office and Storage Building (Canyon Admin)	☒				5,014			
Green Acres Shop	☒				20,700			

Table 4.53 Critical infrastructure for the City of Spearfish as of 2023. Information was provided by Spearfish and 2019 PDM.

Whitewood was also asked to identify critical facilities vulnerable to natural hazards and future hazards due to climate variations. Most facilities share the same risk for all hazards except for more localized hazards such as flooding and certain geological hazards. Assets with specific hazard risk are addressed in the 'notes' section of this plan table 4.54. Whitewood has no special flood hazard areas located within city limits.

Whitewood Inventory Assets								
Name of Asset	Critical Facility	Vulnerable Pop.	Economic	Historic	Size (sq ft)	Replacement Value	Content Value	Notes
City Hall	☒				1,560			
Concrete Water Tank	☒							
Whitewood VFD	☒				4,160			
Whitewood Well #2	☒				62			
Booster Station	☒				170			
Concession Stant			☒		192			
Community Hall		☒			7,500			
Bus Stom Warning House		☒			70			
Clarifier Tank with Lid	☒							Floodplain (located outside of city limits)
Aeration Pond	☒							Floodplain (located outside of city limits)
Wastewater Facility	☒				400			Floodplain (located outside of city limits)
Water tank	☒							
Well Building #4	☒				560			
City Shop	☒				3,200			
Library		☒			1,860			
Ultraviolet Disinfect System Wastewater Facility	☒				288			Floodplain (located outside of city limits)
Well #3	☒				80			
Salt/Sand Storage Building	☒				440			
Post Office	☒							
Public School	☒							

Table 4.54 Critical infrastructure for the City of Whitewood as of 2023.

ASSESSING VULNERABILITY: ESTIMATING POTENTIAL LOSSES

B2-a. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

The following information shows the county and jurisdiction's structure vulnerabilities. Inconsistencies and missing information may result from a lack of existing mechanisms, plans, and technical documents available to the communities. Each of the communities provided the best available data considering the lack

of resources in which to access the information. Lawrence County's Equalization Department was able to provide information on values and number of parcels in the county. Information on the city's was taken from GIS data provided by the Equalization Department. To help evaluate the number of structures located in special flood hazard areas (SFHA) and the floodway a combination of parcel data and Microsoft U.S-wide building dataset 2018 was used to estimate the number and values of structures. No land values were included in the numbers provided.

Lawrence County (unincorporated areas) Estimated Potential Dollar Losses to Vulnerable Structures		
Type of Structure	Number of Parcels	Value of Structures
Residential	6,276	\$1,783,303,840
Commercial	1,218	\$702,837,660
Agriculture	409	\$13,784,050
Total	7,903	\$2,499,925,550
Hazard	Number of Structures	Value of Structures
Floodway	83	\$4,461,550*
Floodplain	732	\$90,390,980*

Table 4.55. Estimated dollar losses to vulnerable structures in Lawrence County (unincorporated areas). *Value based of parcels data; values may not be all located in floodplain.

Central City Estimated Potential Dollar Losses to Vulnerable Structures		
Type of Structure	Number of Parcels	Value of Structures
Residential	116	\$7,264,190
Commercial	26	\$1,618,950
Total	142	\$8,883,140
Hazard	Number of Structures	Value of Structures
Floodway	0	NA
SFHA	45	\$3,694,720*

Table 4.56. Estimated dollar losses to vulnerable structures in Central City. *Value based of parcels data; values may not be all located in floodplain.

Deadwood Estimated Potential Dollar Losses to Vulnerable Structures		
Type of Structure	Number of Parcels	Value of Structures
Residential	1227	\$161,461,350
Commercial	406	\$290,173,460
Total	1633	\$451,634,810
Hazard	Number of Structures	Value of Structures
Floodway	34	\$25,073,850*
SFHA	89	\$34,228,040*

Table 4.57. Estimated dollar losses to vulnerable structures in Deadwood. *Value based of parcels data; values may not be all located in floodplain.

Lead Estimated Potential Dollar Losses to Vulnerable Structures		
Type of Structure	Number of Structures	Value of Structures
Residential	1,495	\$200,090,390
Commercial	131	\$39,805,910
Education	2	NA
Religious	12	NA
Government	3	NA
Total	1,643	\$239,896,300
Hazard	Number of Structures	Value of Structures
Floodway	0	NA
SFHA	19	\$3,010,700*

Table 4.58. Estimated dollar losses to vulnerable structures in Lead. *Value based of parcels data; values may not be all located in floodplain.

Spearfish Estimated Potential Dollar Losses to Vulnerable Structures		
Type of Structure	Number of Structures	Value of Structures
Residential	4,085	\$1,152,724,500
Commercial	675	\$364,270,950
Total	4,760	\$1,516,995,450
Hazard	Number of Structures	Value of Structures
Floodway	39	\$7,236,270*
SFHA	300	\$50,685,230*

Table 4.59. Estimated dollar losses to vulnerable structures in Spearfish. *Value based of parcels data; values may not be all located in floodplain.

Whitewood Estimated Potential Dollar Losses to Vulnerable Structures		
Type of Structure	Number of Structures	Value of Structures
Residential	461	\$63,158,680
Commercial	58	\$12,482,450
Total	519	\$75,641,130
Hazard	Number of Structures	Value of Structures
Floodway	0	NA
SFHA	0	NA

Table 4.60. Estimated dollar losses to vulnerable structures in Whitewood. *Value based of parcels data; values may not be all located in floodplain.

ASSESSING VULNERABILITY: ANALYZING DEVELOPMENT TRENDS

Requirement 201.6(d)(3)) ... Was the plan revised to reflect changes in development?

E1-a. The plan must describe changes in development that have occurred in the hazard-prone areas and how they have increased or decreased in vulnerability of each jurisdiction since the previous plan was approved.

E2-c The update plan must explain how the jurisdiction(s) integrated information from the mitigation plan into other planning mechanisms, as a demonstration of progress in local hazard mitigation efforts.

The land use and development trends for each jurisdiction were identified by representatives from each of the municipalities. Lawrence County continues to implement mitigation requirements, goals, actions, and projects in updates of various planning mechanisms such as comprehensive plan, zoning or other city ordinances and policies. The plan author cannot specify which elements from the 2019 Lawrence Mitigation Plan were included in the updated documents, or if any were included at all.

Lawrence County and all municipalities within have adopted zoning ordinances. Since the last update of this mitigation plan, Lawrence County updated its

comprehensive plan. As part of that process the mitigation plan was consulted. The county also updated its Community Wildfire Protection Plan in 2022, taking into consideration items listed in the mitigation plan. As of 2025, Lead and Spearfish have recently both completed comprehensive plan update. Central City, Deadwood, and Whitewood have not updated their comprehensive plans since the last update of this mitigation plan. However, Deadwood does review their comprehensive plan annually through the Planning and Zoning Commission. As part of this update through meetings and discussions with adopting members it was encouraged to consider mitigations actions during updates to planning documents. Similarly, it is also highly encouraged for communities to ensure updates align with this mitigation plan.

Lawrence County and all the municipalities have adopted building codes. As part of this plan update communities were encouraged to consider mitigation actions during any future updates. Communities were also informed of potential funding opportunities to help update building codes. It is noted in the County's Community Wildfire Protection Plan that the county is seeing more development in the more rural areas of the county. Concerns arise as more development occurs in the WUI and/or increases the area of WUI. These rural areas may not have sufficient or available water sources and timely fire suppression. To address help and address concerns associated with the WUI, communities must work on implementing a combination of strategies such as creating defensible space, improving building codes, and enhancing emergency response plans.

Lawrence County continues to see an increase in growth and development. From 2010 to 2020, there was an increase of 6.9%.⁸⁷ ⁸⁸ From 2019 to 2023 the county has an average of 250 total building permits. When there is growth and development, it is natural the risk from natural hazards would also increase. Lawrence County has been proactive in helping reduce this risk through various planning mechanisms and ordinance (ex. Zoning, building codes, subdivision ordinances...). An excellent example of this is Lawrence County, one of the few counties that requires a fire mitigation plan for certain locations and types of development to help reduce its vulnerability to wildfire.

Information on municipalities can be found in the Unique and Varied Risk Assessment.

⁸⁷ U.S. Census Bureau (2010). 2010: DEC Redistricting Data (PL 94-171)

⁸⁸ U.S. Census Bureau (2020). 2020: DEC Redistricting Data (PL 94-171)

UNIQUE OR VARIED RISK ASSESSMENT

Requirement 201.6(c)(2)(i))... Does the plan include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction? Does the plan also include information on previous occurrences of hazard events and on the probability of future hazard events?

B1-f. For the multi-jurisdictional plans, when hazard risks differ across the planning area and between participating jurisdictions, the plan must specify the unique and varied risk information for each applicable jurisdiction and their assets outside the planning area.

Fire Factor Rating System

Risk Rating	% of properties with chance of burn over next 30 years
Minimal	Little to no risk
Minor	Less than 1%
Moderate	1-6%
Major	6-14%
Severe	14-26%
Extreme	More than 26%

Table 4.61. Fire Factor Summary. (Risk Factor. 2023. *How is my fire factor calculated?*)

After conducting the risk assessment for each jurisdiction, most hazards have the risk of impacting all areas of the county including the jurisdictions. While all areas are susceptible to wildfire, historical fire data shows that jurisdictions near forested areas have a higher chance of wildfire. However, based on historical data these areas are mostly concentrated near federal lands.

To better examine the flood and wildfire risk in communities, *Risk Factor* was used as a reference. *Risk Factor* uses a *First Street Foundation* modeling method which shows risk of wildfires and flooding from rain, rivers, tides, and storm surge in specific locations. The model was created using decades of peer-reviews, climatology models, hydrology, and statistics ⁸⁹. The flood and wildfire risks evaluated are social, residential, commercial, infrastructure and roads. The overall rating ranges from minor, moderate, major, severe, and extreme. The model considers the changing of climate in its findings. ⁹⁰ The unique risk for each jurisdiction is listed below.

Flooding risk is based on the likelihood of a building footprint being flooded. The First Street Foundation Wildfire Model also assists in determining the probability of a community's risk of being directly impacted by wildfire or indirectly impacted by embers. The risk rating incorporates the impacts wildfire can have on infrastructure, emergency services, transportation, businesses, and finances of homeowners. ⁹¹ Table 4.61 outlines the rating scale.

Central City

Central City is in central Lawrence County, with roughly 93 residents. From 2010 to 2020, the community has seen a -30.6% population decrease. Central City has limited space for new growth and since 2019, minimal new development has occurred. Based on the limited amount of new development, the risk and vulnerability from natural hazards is expected to remain mostly unchanged.

Central City is governed by a town board and no full-time staff. With it has limited capacity in both personnel and funding, the city hasn't had the opportunity to implement mitigation actions into planning mechanisms since the last mitigation plan update.

Central City NFIP Status Information

Community	Initial Flood Hazard Boundary Map	Initial FEMA Insurance Rate Map	Current Effective Map Date	Reg. Program/Emergency Program Date
Central City	NA	04/17/2012	04/17/2012	09/24/2012

⁸⁹ First Street Foundation. *First Street Foundation Flood Model 2020 Methodology Overview*

⁹⁰ Ibid. First Street Foundation.

⁹¹ Risk Factor. 2024

Table 4.62: Central City’s Flood Mapping Information. *Regular Program: The final phase of a community’s participation in the NFIP. Emergency Program: The initial phase of the community’s participation in the NFIP. Information provided by State NFIP Coordinator and South Dakota Office of Emergency Management.

Central City currently participates and plans to continue participation in the National Flood Insurance Program (NFIP). The city has adopted a Flood Damage Prevention Ordinance which meets the minimum floodplain management criteria. Central City contracts with the City of Lead’s Building Inspector as their floodplain administrator. While the community does not currently have a certified floodplain administrator, there has been some interested in looking into certification. Central City does not currently participate in the Community Rating System (CRS), due to funding and personnel limitations is unlikely to join at this time.

Flood Factor: Flooding Risk	
Category Type	Risk
Overall, Central City	Major
Residential	Minor
Commercial	Minor
Infrastructure	No Data
Social	No Data
Roads	Extreme

Table 4.63. Flood Factor Summary. Central Center, SD. (Risk Factor, 2024, Flood Factor).

Central City’s is rated as having a major risk from flooding. Seventy-six percent of all properties in Central City at noted to be at risk.⁹² However, *Flood Factor* estimates this number to decrease to 73% in the next 30 years.

Central City’s floodplain management regulations apply to all areas within special flood hazard areas (SFHA) within city limits. Central City requires a flood development permit to be obtained before any construction of a building or structure is built within the SFHA under its jurisdiction. The Flood Damage Prevention Ordinance states an elevation certificate, no rise certification, or flood-proofing certificate

all prepared and stamped by a professional engineer may be required for properties in the floodway.

Central City considers a structure substantially damaged if the cost of restoring the structure damages equals or exceeds 50% of the market value before damage. Central City’s current ordinance (2012) does not outline the process for determining substantial damages. There is potential in the future for FEMA to remap this area. At that time Central City would need to update its Flood Damage Prevention Ordinance for NFIP compliance.

The city has identified drainage issues in the western section, which causes flooding on the streets during heavy rain events and rapid snow melt. According to the Central City’s *Drainage Evaluation* the water comes from Highway 14A and the hill to the north. The crossing on Golden Street also experiences inundation from time to time. Central City is currently exploring possible funding options to address these drainage concerns. As part of this project an H&H study may be needed.

⁹² Flood Factor. 2024



Figure 4.9. Central City Flood Map. Data provided by Lawrence County GIS.

Central City, as well as the surrounding cities of Deadwood and Lead, received their water supply from the Lead-Deadwood Sanitary District. While it was noted that the district does not have concerns on water capacity, there are areas with older infrastructure. The sanitary district continues to work towards repairs and updates when needed.

An area of concern is the potential for a decrease or loss of potable water in the event of a water break in part do the current water tank potentially being undersized. The current water tank that supplies Central City is owned by Lead. More data or a study would need to be conducted to evaluate the current tank is an adequate size for the population served.

Fire Factor: Wildfire Risk	
Category Type	Risk
Overall, Central City	Major
Residential	Major
Commercial	Major
Infrastructure	No Data
Social	No Data

Table 4.64. Fire Factor Summary. Central Center, SD. (Risk Factor, 2024, Fire Factor).

Like most of the county, Central City is susceptible to wildfire. Fire Factor estimates that 100% of properties in the city are at some risk of being affected by wildfire. Central City's high risk is most likely partially due to its location in the Black Hills, making the entire town essentially located inside the WUI.

City of Deadwood

The City of Deadwood has seen a decrease in population of (-)9.0% from 2010 to 2020.⁹³ According the 2022 American Community Survey 5-year estimates, Deadwood has a population of 1,423. Deadwood is known as a popular tourist destination. The City of Deadwood estimates during weekends of the off season this number is around 33,663. During peak season, the weekly average population is anticipated to reach 108,747. Both the City and local businesses sponsor special events to help attract visitors to the area, with the number of events growing each year. The Sturgis Motorcycle Rally also impacts Deadwood, with tens of thousands of visitors coming to Deadwood daily. The city has a total of 23 hotels with the ability to accommodate 1,659 guests. Additionally, the city has 25 casinos, numerous retail and service-related businesses and roughly 70 visitor attractions. There are 661 residents, with approximately 67% resident-owned and 33% utilized as rental properties.⁹⁴

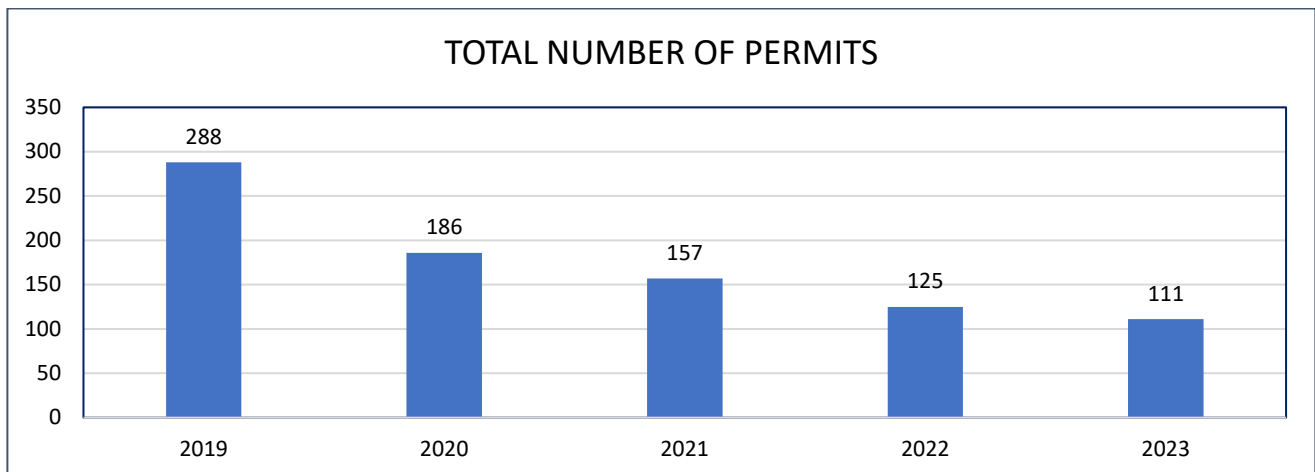


Figure 4.10. Deadwood total number of building permits. Data provided by City of Deadwood.

By its nature, when a community experiences growth and development, their risk and vulnerability increase. Deadwood continues to be proactive in its efforts to help mitigate these risks through various planning mechanisms and policies. Deadwood continues to implement mitigation requirements, goals, actions, and projects in updates of various planning mechanisms such as comprehensive plan, zoning or other city ordinances and policies. The plan author cannot specify which elements from the 2019 Lawrence Mitigation Plan were included in the updated documents, or if any were included at all. Since the last plan update the City of Deadwood has been working on numerous mitigation projects:

⁹³ U.S Census. Decennial Census 2010-2020.

⁹⁴ City of Deadwood.

1. A flood diversion dam was completed at the bottom of Spruce Gulch to protect the Rodeo Grounds, sports fields, and adjacent residences.
2. Floodway control was constructed on the hospital gulch to divert water around and away from the hospital.
3. Bank stabilization projects have been completed. Some are on-going, these include installing gabion baskets in several locations.
4. Two early warning sirens have been installed.
5. Work has been done to improve communication interoperability between city public works and response agencies.
6. FEMA project, valued at \$8 million, is currently in progress, replacing/rebuilding Whitewood Creek bulkheads.
7. Fire response and police capabilities have been upgraded.
8. Multi-hazard response capabilities and planning are being improved.
9. Deadwood participates in the Firewise Program to help reduce wildland urban interface wildfires

Deadwood has adopted the International Building Code 2021, International Property Maintenance Code 2021, International Existing Building Code 2021, Chapters 1-10, 12-24 and 44 of the International Residential Code 2021, International Mechanical Code 2021, International Fire Code 2021, and Appendix J of the International Building Code 2021, and Appendix A of the International Property Maintenance Code 2021, and Appendix C of the International Building Code 2021, and the International Fuel Gas Code 2021.

Flood Factor: Flooding Risk	
Category Type	Risk
Overall, Deadwood	Extreme
Residential	Minor
Commercial	Minor
Infrastructure	Extreme
Social	Extreme
Roads	Extreme

Table 4.65. Flood Factor Summary. Deadwood, SD. (Risk Factor, 2024, Flood Factor).

Deadwood was historically developed along flood prone areas. As a result, the city has experienced numerous historic flooding events. Flash flooding events occur almost annually and are in part due to the steep mountainous terrain. The City of Deadwood provided information on flash flood events which overextended city resources and required outside assistance: 1963, 1965, 1972, 1988, 2001, 2004, 2007, 2008, 2010 and 2019. In 1976, a flood and mudslide event resulted in 1 fatality and the damage or loss of 11 structures. The community has also seen the aftermath of wildfires in the area have a domino effect creating flooding and mudslide events. In 2002, the post-Grizzly Gulch fire played a role in significant flood damage, with several

businesses impacted and damaged to the Steward Street retaining wall. During that time, there was concern about the safety of the hospital. In 2010, a flash flood caused water to flow down Sherman Street.

Deadwood NFIP Status Information				
Community	Initial Flood Hazard Boundary Map	Initial FEMA Insurance Rate Map	Current Effective Map Date	Reg. Program/Emergency Program Date
Deadwood	07/11/1975	04/16/1990	04/17/2012	02/03/1982

Table 4.66: Deadwood's Flood Mapping Information. *Regular Program: The final phase of a community's participation in the NFIP. Emergency Program: The initial phase of the community's participation in the NFIP. Information provided by State NFIP Coordinator and South Dakota Office of Emergency Management.

The City of Deadwood participates in the National Flood Insurance Program (NFIP) and actively manages their identified special flood hazard area. Deadwood's current effective map is from 04/17/2012. In September of 2012, Deadwood adopted their Flood Damage Prevention Ordinance as part of the requirements for participation in the NFIP. As per the ordinance the City Planner serves as the city's floodplain administrator. Deadwood's current floodplain administrator is not currently certified but has expressed interest in obtaining certification. Deadwood is committed to continue to administrate their Flood Damage Prevention ordinance and continue participate in the NFIP.

In accordance with Deadwood’s floodplain management regulations, a flood development permit is required for construction in all areas within special flood hazard areas (SFHA) within city limits. The Flood Damage Prevention Ordinance may require an elevation certificate, no rise certification, or flood-proofing certificate, all which must be prepared and stamped by a professional engineer.

Deadwood considers a structure substantially damaged if the cost of restoring the structure damages equals or exceeds 50% of the market value before damage. Deadwood’s current ordinance (2012) does not outline the process for determining substantial damages. There is potential in the future for FEMA to remap this area. At that time Deadwood would need to update its Flood Damage Prevention Ordinance for NFIP compliance.



Figure 4.11. Deadwood Flood Map. Data provided by Lawrence County GIS.

Deadwood has had events of landslides and mudslides. Two notable incidents occurred following the Grizzle Gulch fire in 2002. The city experienced two mudslides within days of each other. Debris from the slides damaged homes,

vehicles, and threatened the hospital. The mud and flash flooding inundated several downtown businesses and impacted travel.

A large amount of the city infrastructure is held up by retaining walls. The City of Deadwood’s building inspector regularly makes inspections of all walls, retaining walls, and bulkhead walls that support public infrastructure. If a private wall needs repair, it is the duty of the owner to repair the wall. Deadwood has a retaining wall program for residential properties to help in the repair of historic walls in the community. Additionally, any walls that threaten the safety of people or residential property are also eligible.

There are numerous communities in the Black Hills region that have increased risk and vulnerability to hazards such as flooding and wildfire due to a lack of secondary access and egress. These secondary routes create an alternative route for neighborhoods in the event of an evacuation or for emergency responders to help avoid bottlenecks in the event of an emergency. Requiring secondary access as part of the subdivision process helps lessen problems later, as incorporating secondary access after development has occurred is not only costly but at times impossible due to lack of easements. The City of Deadwood does not currently require secondary access and egress for any size subdivision. Deadwood should consider updating ordinances to help address this concern.

Fire Factor: Wildfire Risk	
Category Type	Risk
Overall, Deadwood	Severe
Residential	Severe
Commercial	Severe
Infrastructure	Severe
Social	Severe

Table 4.67. Fire Factor Summary. Deadwood, SD. (Risk Factor, 2024, Fire Factor).

Like most of the county, Deadwood is susceptible to wildfire. Fire Factor estimates that 100% of properties in the city are at some risk of being affected by wildfire. In more recent years the community was impacted by the Grizzley Gulch Fire in 2002, which reach inside city limits. Parts of the Deadwood and surrounding communities were evacuated.

City of Lead

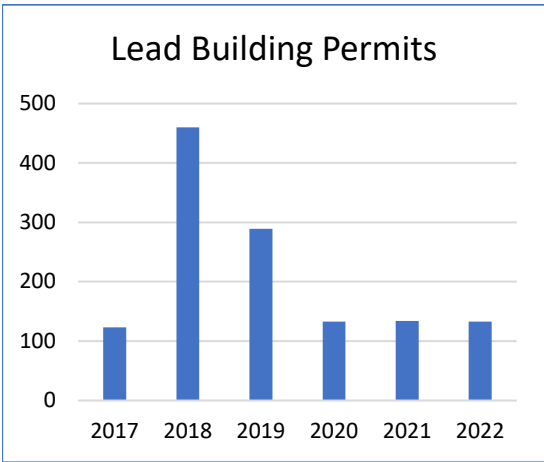


Figure 4.12. Lead total number of building permits. Data provided by City of Lead.

The City of Lead has seen a decrease in population of (-)4.5% from 2010 to 2020.⁹⁵ According to the 2023 American Community Survey 5-year estimates, Lead has a population of 2,997. Figure 4.12 shows the number of building permits (all permit types) from 2017 to 2022. Anytime there is new development there is automatically an increase in risk from natural hazards, whether direct or indirectly. The City of Lead helps to mitigate these risks through administration and enforcement of numerous ordinances, building codes and planning mechanisms. The plan author cannot specify which elements from the 2019 Lawrence County Mitigation Plan were included in the updated documents, or if any were included at all.

The city is currently in the process of updating their Comprehensive Plan. This Mitigation Plan and the Lead Comprehensive Plan were created side by side to complement and support each other. Lead has also been reviewing and updating several different ordinances and considered mitigation actions during the update process.

⁹⁵ U.S Census. Decennial Census 2010-2020.

Lead updated its building codes in 2023 to the International Residential Code 2021 (with appendix chapters), International Building Code 2021, International Fire Code 2021 (with appendix chapter), International Fuel Gas Code 2021 (with appendix chapters), International Existing Building Code 2021, International Energy Conservation Code 2021, International Mechanical Code 2018 (with appendix chapters), International Property Maintenance Code 2021, International Urban-Wildland Interface Code 2021 (with appendix chapters), and International Private Sewage Disposal Code 2021.

The City of Lead participates in the National Flood Insurance Program (NFIP) and actively manages their floodplain. Lead’s current effective map is from 04/17/2012. In March of 2012, Lead adopted their Flood Damage Prevention ordinance as part of the requirements for participation in the NFIP. As per the ordinance the Building Official/Inspector serves as the city’s floodplain administrator. Lead’s current floodplain administrator is not currently certified but has expressed interest in obtaining certification. Lead is committed to continue to administrate their Flood Damage Prevention ordinance and continue participate in the NFIP.

Lead NFIP Status Information				
Community	Initial Flood Hazard Boundary Map	Initial FEMA Insurance Rate Map	Current Effective Map Date	Reg. Program/Emergency Program Date
Lead	02/07/1975	04/17/2012	04/17/2012	04/17/2012

Table 4.68: Lead’s Flood Mapping Information. *Regular Program: The final phase of a community's participation in the NFIP. Emergency Program: The initial phase of the community's participation in the NFIP. Information provided by State NFIP Coordinator and South Dakota Office of Emergency Management.

Under Lead’s floodplain management regulations, a flood development permit is required for the construction of buildings or structures within the Special Flood Hazard Area (SHFA) within city limits. The Flood Damage Prevention Ordinance may also require an elevation certificate, no rise certification, or flood-proofing certificate, all prepared and stamped by a professional engineer.

Lead considers a structure substantially damaged if the cost of restoring the structure damages equals or exceeds 50% of the market value before damage. Lead’s current ordinance (2012) does not outline the process for determining substantial damages. There is potential in the future for FEMA to remap this area. At that time Lead would need to update its Flood Damage Prevention Ordinance for NFIP compliance.

Flood Factor: Flooding Risk	
Category Type	Risk
Overall, Lead	Major
Residential	Minor
Commercial	Minor
Infrastructure	Extreme
Social	Moderate
Roads	Severe

Table 4.69. Flood Factor Summary. Lead, SD. (Risk Factor, 2024, Flood Factor).

Flood Factor suggests there is a 26% chance of an estimated 232 properties being severely affected by flooding over the next 30 years. The impacts could include damage or disruptions impacting on the day-to-day function of the community.

One of the leading concerns in Lead as it relates to flooding is the older infrastructure in some areas of town with combined sewer and stormwater. During normal conditions, this system can handle both types of waste. However, in the event of heavy rain or rapid snow melt, the system can overwhelm the system. Lead has been working on separating the sewer and stormwater, but the process has been slow going due to the high costs of the project.



Figure 4.12. Lead Flood Map. Data provided by Lawrence County GIS.

Fire Factor: Wildfire Risk	
Category Type	Risk
Overall, Lead	Severe
Residential	Severe
Commercial	Severe
Infrastructure	Severe
Social	Severe

Table 4.70. Fire Factor Summary. Lead, SD. (Risk Factor, 2024, Fire Factor).

Like most of the county, Lead is susceptible to wildfire. Fire Factor estimates that 100% of properties in the city are at some risk of being affected by wildfire. In more recent years the community was impacted by the Grizzley Gulch Fire in 2002. The wildfire caused several communities in the area to evacuate. Following the fire Lead worked to become a FireWise community. In recent years the city has not kept up with the designation but does encourage FireWise practices.

The City of Spearfish has seen an increase in population of 16.2% from 2010 to 2020.⁹⁶ According the 2022 American Community Survey 5-year estimates, Spearfish has a population of 12,268. Building permits from 2018 to 2023 show a large increase in the annual number of permits for new construction of single family residential. Any new development inherently increases the risk and vulnerability to natural hazards. The City of Spearfish helps to mitigate these risks through administration and enforcement of numerous ordinances, building codes and planning mechanisms. The plan author cannot specify which elements from the 2019 Lawrence County Mitigation Plan were included in the updated documents, or if any were included at all.

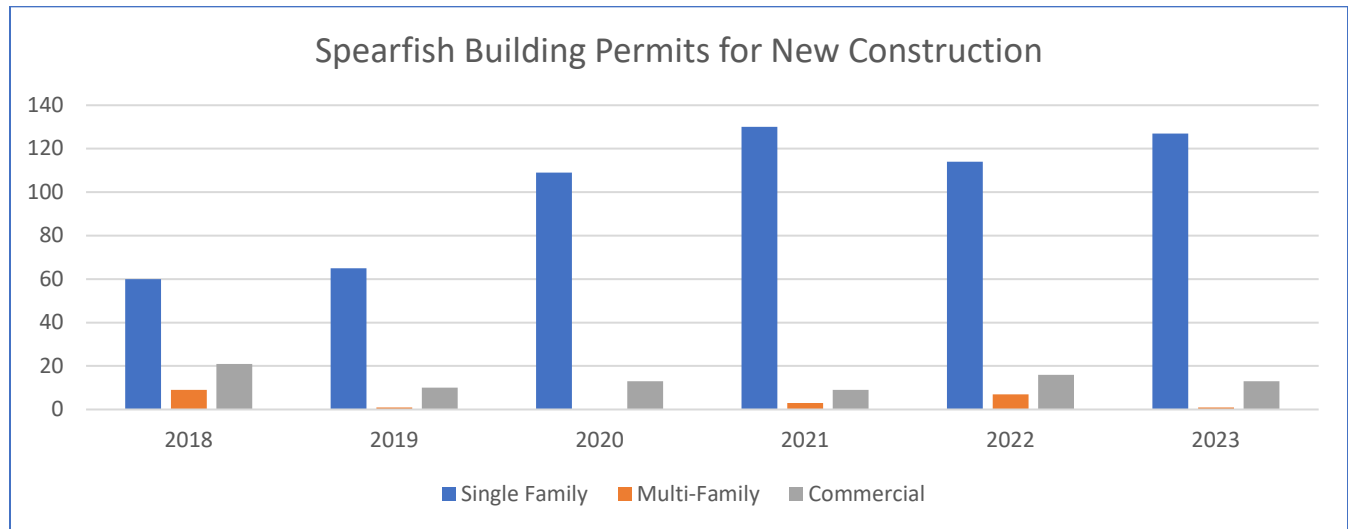


Figure 4.13. Spearfish number of building permits. Data provided by City of Lead.

The City of Spearfish is currently in the process of updating their comprehensive plan. The author of this plan also has been serving as a stakeholder for the Spearfish Comprehensive Plan update. As part of the update of both this natural hazard mitigation plan and Spearfish Comprehensive Plan, the information taken to create both documents were incorporated into each plan. Spearfish Comprehensive Plan authors have been taking into consideration natural hazards while working through the drafting process and land use map creation.

Additionally, the City of Spearfish has continued to update ordinances and plans as needed, taking mitigation actions into consideration when appropriate. Spearfish hopes to evaluate some ordinances based on discussions had during the update of this plan, which will be considered in the mitigation actions section of this plan. Spearfish has also expressed the desire to further evaluate their current building code and enforcement.

Spearfish has adopted the 2021 International Residential Code for One- and Two-Family Dwellings, Chapters 1-24 and 44, and the 2021 International Building Code. Spearfish has several historical events that highlight the importance of building codes. A commercial building experienced roof damage due to snow loads exceeding capacity. The structure was originally constructed according to the older building codes, which were not sufficient to account for the typical snow loads in the area. Spearfish continues to update building codes to help mitigate hazards.

The community also experienced the loss of an airport hangar due to older ordinances not requiring anchoring. On August 1, 2000, a severe thunderstorm with extremely high winds caused extensive damage. The total damage was \$9,500,000 to the Spearfish area. Several mobile homes were destroyed and several steel buildings at the county airport were a total loss, 6 persons were injured.⁹⁷ Spearfish now requires anchoring for mobile homes.

⁹⁶ U.S Census. Decennial Census 2010-2020.

⁹⁷ Lawrence County Pre-Disaster Mitigation Plan 2018.

Similarly, the city’s adopting building code addresses anchoring and wind loads. Spearfish continues to incorporate mitigation actions into ordinances when updated.

Flood Factor: Flooding Risk	
Category Type	Risk
Overall, Spearfish	Minor
Residential	Minor
Commercial	Minor
Infrastructure	Minor
Social	Minor
Roads	Moderate

Table 4.71. Flood Factor Summary. Spearfish, SD. (Risk Factor, 2024, Flood Factor).

One of the greatest hazard concerns in the city was flooding. The City of Spearfish participates in the National Flood Insurance Program (NFIP) and actively manage their floodplain. Spearfish’s current effective FIRM map was completed on 4/17/2012. In March of 2012, Spearfish adopted their Flood Damage Prevention ordinance as part of the requirements for participation in the NFIP. As per the ordinance the floodplain administrator has been appointed. Currently the City Engineer serves as the floodplain administrator. Spearfish is committed to continue to administrate their Flood Damage Prevention ordinance and continue participate in the NFIP. The city has participated in the Community Rate System (CRS) since 2014 and currently

has a rating of 9. While the city plans to continue participation in CRS, there may be capability constraints on further improvement to level 8.

Spearfish NFIP Status Information				
Community	Initial Flood Hazard Boundary Map	Initial FEMA Insurance Rate Map	Current Effective Map Date	Reg. Program/Emergency Program Date
Spearfish	03/29/1974	09/02/1981	04/17/2012	09/02/1981

Table 4.72: Spearfish’s Flood Mapping Information. *Regular Program: The final phase of a community's participation in the NFIP. Emergency Program: The initial phase of the community's participation in the NFIP. Information provided by State NFIP Coordinator and South Dakota Office of Emergency Management.

As part of Spearfish’s floodplain management regulations, a flood development permit is required for any construction of buildings or structures within Special Flood Hazard Areas (SFHAs) located within city limits and the city’s extra-territorial jurisdiction. The city’s Flood Damage Prevention Ordinance may also require an elevation certificate, a no-rise certification, or a flood-proofing certificate, all of which must be prepared and stamped by a licensed professional engineer.

Spearfish considers a structure to be substantially damaged when the cost of restoring it to its pre-damage condition equals or exceeds 50% of its market value. However, the city’s current ordinance (2012) does not specify the process for determining substantial damage. However, the city follows FEMA’s guidelines on determining substantial damage. Spearfish is currently in the process of updating their floodplain ordinance. As of 2025, the ordinance is currently being reviewed by FEMA.

In June of 2023, Spearfish experienced a flash flooding event which left flooding of homes, vehicles, and floodways. This event created a situation where some residents were impacted by flooding homes and apartments needing to find temporary living situations. The areas that saw the worst flooding damage were on 10th Street, north of Jackson Boulevard, and 7th and Federal St. ⁹⁸ The infrastructure on 10th street was originally designed to 50-year event. Spearfish is having discussions to potentially address this area by upgrading the infrastructure to withstand a 100-year event. The city is exploring the feasibility of updating requirements for 100-year events into ordinances.

While perhaps not entirely mitigation, the community expressed the desire to create a city response plan in the event of an emergency. This would include a chain of command and step-by-step action items for all staff and emergency responders.

⁹⁸ Black Hills Pioneer. June 24, 2023.

Flooding can also be significantly impacted by the obstruction of drainage ways. Although the city actively works to maintain and clear these drainage routes, their efforts are limited when it comes to private property. As a result, the city has expressed interest in exploring potential options for establishing agreements between local landowners and the city to collaboratively clear and maintain drainage ways. This approach could help mitigate flooding risks while ensuring that drainage systems remain functional and effective.

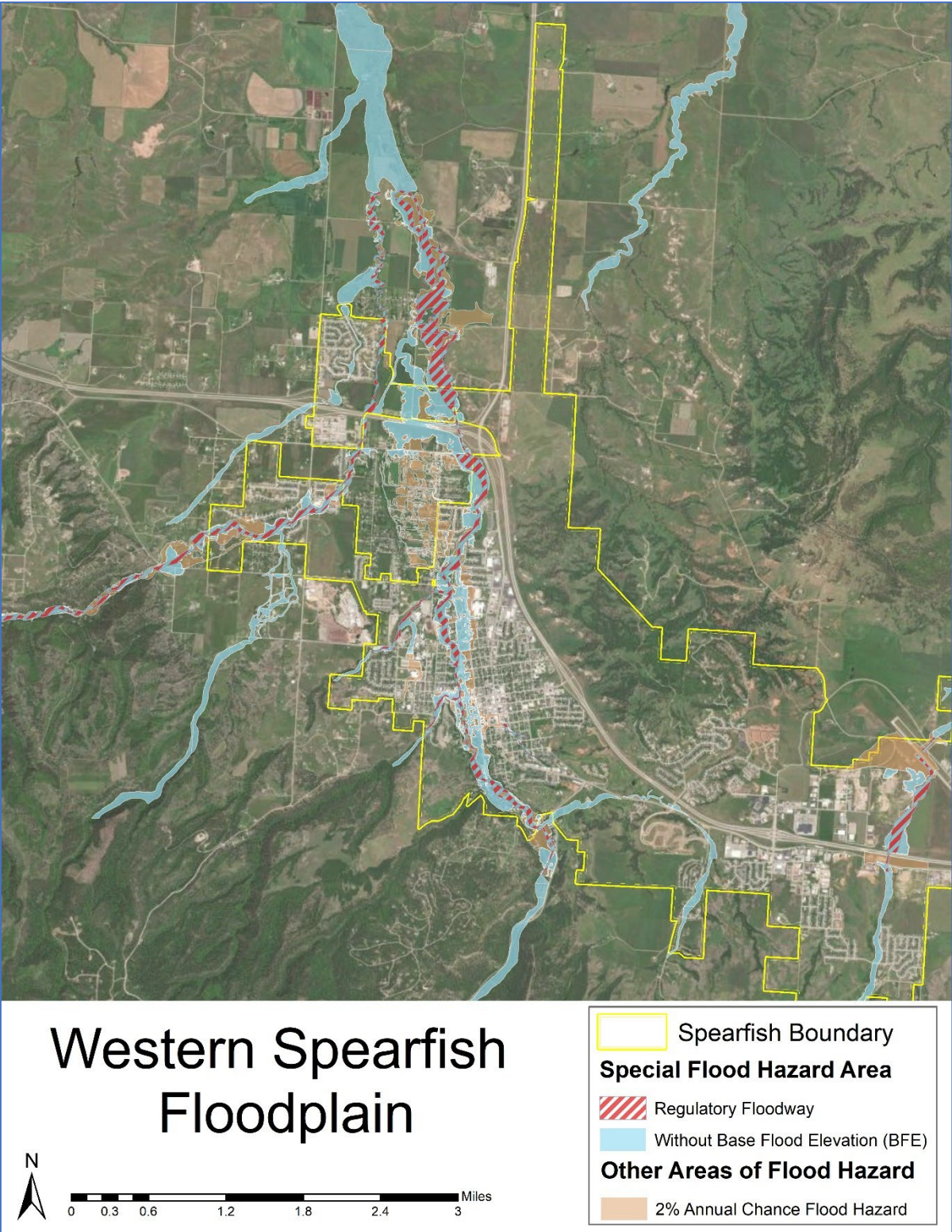


Table 4.13. Western Spearfish Flood Map. Data provided by Lawrence County GIS.



Table 4.14. Eastern Spearfish Flood Map. Data provided by Lawrence County GIS.

The community has identified several geological features that may pose challenges for development, including red soil, gypsum deposits, and unidentified springs. The city has experienced impacts on public infrastructure because of the underlying gypsum. In the 80’s the city’s lagoons were constructed over gypsum and subsequently ended up failing and created environmental concerns. The lagoons have since relocated. During the development process, geotechnical reports can be requested at the engineering department’s discretion.

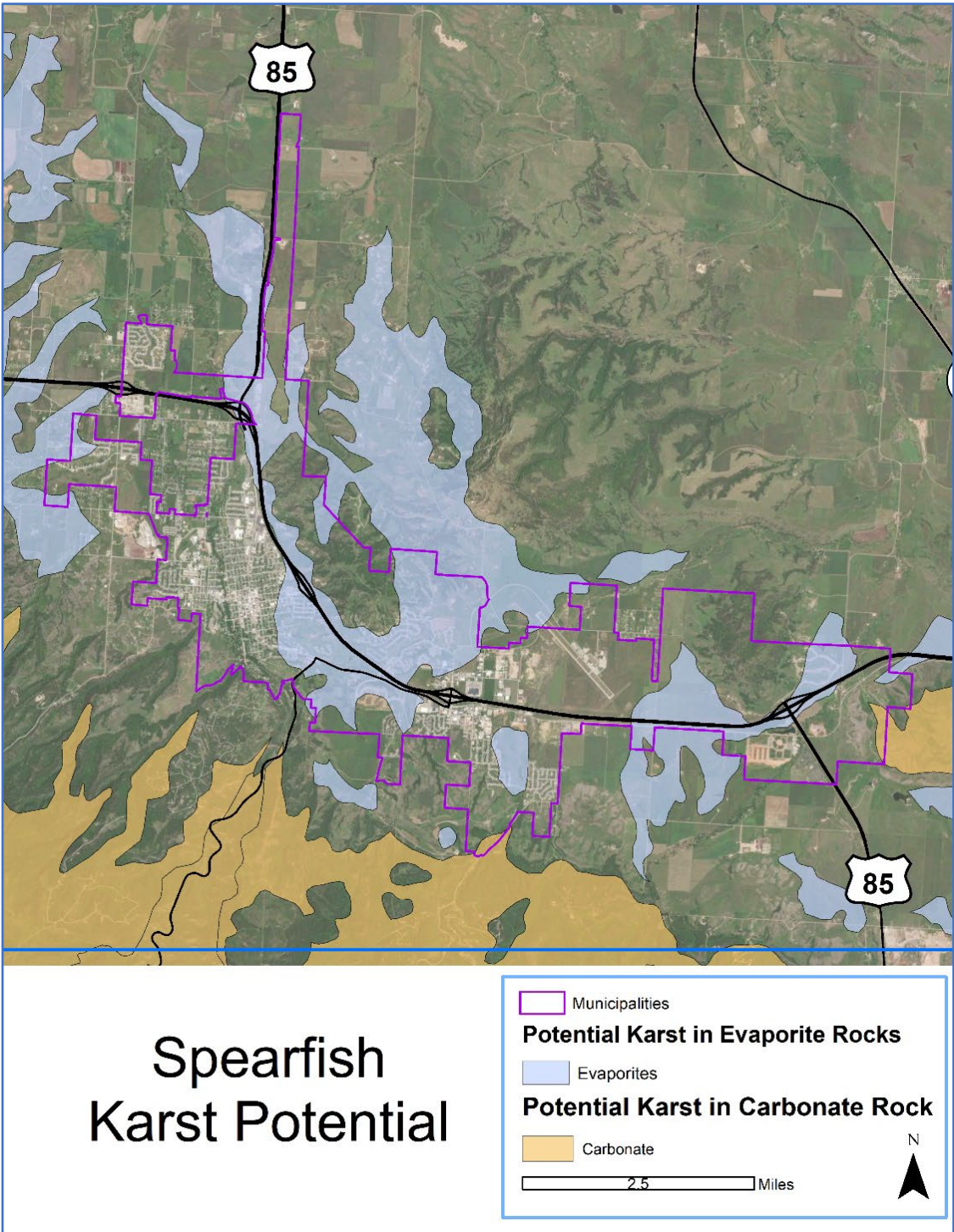


Table 4.15. Spearfish potential areas with karst formations.

The community also noted an area near I-90’s exit 17, with active land movement. This area is currently undeveloped, but it should be recognized as a location where mitigation measures will be necessary for any future development, or where development may need to be discouraged altogether. Additionally, it is important to note

that a sinkhole has been identified at the southern end of Colorado Boulevard, which may require further attention and consideration in planning.

As the community can be impacted by both summer and winter storms, the community’s recreation center has the capacity to serve as a shelter, providing a safe refuge for residents. It can accommodate individuals who are displaced by storms, offering protection from the elements and a place to stay until conditions improve. However, the facility currently lacks an emergency backup generator, which poses a challenge in the event of a power outage. Without a backup power source, the shelter’s ability to provide heat during winter storms or cooling during summer heatwaves could be compromised, especially in prolonged outages. The city has expressed a strong interest in securing funding and resources to install a backup generator for the facility. This addition would ensure that the shelter can continue to serve the community effectively, regardless of weather conditions or power disruptions.

Fire Factor: Wildfire Risk	
Category Type	Risk
Overall, Spearfish	Severe
Residential	Severe
Commercial	Severe
Infrastructure	Major
Social	Major

Table 4.78. Fire Factor Summary. Spearfish, SD. (Risk Factor, 2024, Fire Factor).

Like most of the county, Spearfish is susceptible to wildfire. Fire Factor estimates that 100% of properties in the city are at some risk of being affected by wildfire. The city encourages FireWise practices. One challenge noted was the Mountain Plains area, which houses several homes. This area only has a single access/egress route. In the event of evacuation this area may prove to be a challenge for evacuations or for response from emergency personnel.

City of Whitewood

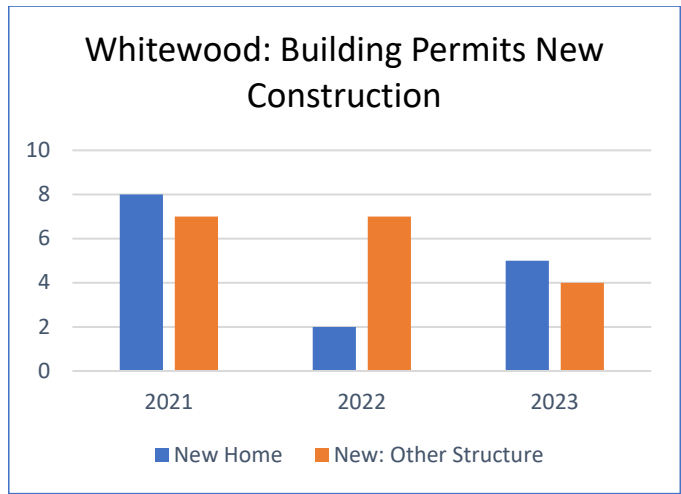


Table 4.79. Whitewood Building Permits for New Construction (Structures)

Whitewood is in the northwestern part of Lawrence County and sits close to Interstate 90. The city has seen a -5.2% population decrease from 2010 to 2020. Since 2019, there has been minimal new development that has occurred. Table 4.79 shows the number of new constructions for structures from 2021 to 2023. Since the last update of this plan risks from natural hazards is likely unchanged. Whitewood has limited capacity and hasn’t had the opportunity to implement mitigation actions into planning mechanisms since the last mitigation plan update.

Whitewood Climatic and Geographical Design Criteria

Ground Snow Load	43
Wind Speed	115
Seismic Design Category	A
Subject to Damage From:	
Weathering	Moderate
Frost Line Depth	42 inches
Termite	None to slight
Decay	None to slight
Winter Design Temperature (f)	-7
Ice Shield Under-Underlayment Required	Yes
Flood Hazards	NFIP
Air Freezing Index	2,000
Mean Annual Temperature	42

Table 4.79. Whitewood climatic and geographical design criteria, building codes.

Since the last plan update, Whitewood has had minimal opportunity to incorporate mitigation actions into planning mechanisms. When planning documents and ordinances are reviewed and updated the city will consider mitigation measures. Whitewood currently utilizes the 2021 International Building Code and Chapter 1-24 of the 2021 International Residential Code, updated in 2022. The city also has specific guides for climatic and geographical design criteria.

The City of Whitewood participates in the National Flood Insurance Program (NFIP). Whitewood does not currently have any identified Special Flood Hazard Areas (SFHA) located within city limits. With this designation of NSFHA (No Special Flood Hazard Area), FEMA does not require the adoption of a flood prevention ordinance to participate in NFIP, this would include the appointment of a floodplain administrator. Whitewood's current effective map was effective as of 04/17/2012. In April of 2012, Whitewood was approved by FEMA as compliant with no suspension due to the city being noted as NSFHA. However, in the event of a new FEMA FIRM map adoption, this would need to be re-evaluated. Similarly, in the event of annexation of SFHA into city limits, Whitewood would need to adopt a flood prevention ordinance to remain a participant of NFIP. Whitewood is committed to participation in the NFIP.

While located in the county, the city's lagoon is in a floodplain. The city continues to monitor drainage areas with two different basin studies and upgrades to drainage system with culverts, trenching, and rip rap.

Flood Factor: Flooding Risk

Category Type	Risk
Overall, Whitewood	Minor
Residential	Minor
Commercial	Minor
Infrastructure	Minor
Social	Minimal
Roads	Moderate

Table 4.80. Flood Factor Summary. Whitewood, SD. (Risk Factor, 2024, Flood Factor).

Lawrence County Municipalities NFIP Status Information

Community	Initial Flood Hazard Boundary Map	Initial FEMA Insurance Rate Map	Current Effective Map Date	Reg. Program/Emergency Program Date
Whitewood	08/13/1976	04/17/2012	(NSHFA)	11/30/1983

Table 4.81: Whitewood's Flood Mapping Information. *Regular Program: The final phase of a community's participation in the NFIP. Emergency Program: The initial phase of the community's participation in the NFIP. Information provided by State NFIP Coordinator and South Dakota Office of Emergency Management.



Whitewood Floodplain

- Whitewood Boundary
- Special Flood Hazard Area**
- Without Base Flood Elevation (BFE)
- Regulatory Floodway
- Other Areas of Flood Hazard**
- 2% Annual Chance Flood Hazard

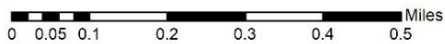


Table 4.16. Whitewood Flood Map. Data provided by Lawrence County GIS.

Whitewood may have areas with expansive soil. The challenge with these soils is often geotechnical engineering is required to identify them. Mitigating geological hazards such as landslides, subsidence, and expansive soils often requires development restrictions or special engineering requirements. The key to this is knowing where your risk is, as new development occurs. This can be somewhat challenging with limited data or costly studies. It is important as the city receives geological data this information is noted. This will allow for future utilization and enforcement of various planning mechanisms that can help to mitigate the impacts of this hazard. Whitewood’s ordinances note that the Common Council may request, in areas with soil concerns in the city, a technical review of soil conditions and engineering prior to the issuing of a building permit.

Fire Factor: Wildfire Risk	
Category Type	Risk
Overall, Whitewood	Severe
Residential	Severe
Commercial	Severe
Infrastructure	Major
Social	Severe

Table 4.82. Fire Factor Summary. Whitewood, SD. (Risk Factor, 2024, Fire Factor).

Like most of the county, White is susceptible to wildfire. Fire Factor estimates that 100% of properties in the city are at some risk of being affected by wildfire. The city encourages FireWise practices.

V. MITIGATION STRATEGY

Changes/Revisions to Introduction: The mitigation strategy has been completely reformatted to include specific goals, objectives, and projects for not only the County but also each jurisdiction. Goals and projects from the previous Plan have been addressed in other sections of this Plan. Goals and projects that were completed have been removed from the list. Goals that were considered to be response and recovery were also removed. This reformatting looks at mitigation actions and projects that are specific to each hazard identified in the risk assessment. A complete list of updates of goals and actions from the previous plan are listed in Appendix E.

Requirement 201.6(c)(3))... *Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs?*

- C1-a.** The plan must describe the existing authorities, policies, programs, funding, and resources of each participant are available to support the mitigation strategy.
- C1-b** The plan must describe the ability of each participant to expand on and improve the capabilities described in the plan.
- C3-a.** The plan must include goals to reduce the risk of the identified hazards. Goals must be consistent with the hazards identified in the plan.

Requirement 201.6(c)(3)(iii))... *Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure?*

- C4-a.** The mitigation strategy must include an analysis of a comprehensive range of actions of projects that the participants considered to specifically address vulnerabilities identified in the risk assessment.
- C4-b** Each plan participant must identify one or more mitigation actions the participant(s) intends to implement for each hazard addressed in the risk assessment.

Requirement 201.6(c)(3)(iii))... *Does the plan contain an action plan that describes how the actions identified will be prioritized, implemented, and administered by each jurisdiction?*

- C4-a.** The plan must describe the criteria used for prioritizing the implementation of the actions. The criteria must include an emphasis on the extent to which benefits are maximized, in relation to the associated costs of the action.
- C4-b** The action plan must identify who is responsible for administering each action, along with the action's potential funding source and expected time frames for completion.

MITIGATION REQUIREMENTS

MITIGATION OVERVIEW

The *State of South Dakota Hazard Mitigation Plan* addresses several mitigation categories including warning and forecasting, community planning, and infrastructure reinforcement.⁹⁹ After meeting with the local jurisdictions, stakeholders and public input, a series of mitigation goals were established to best aid the County and jurisdictions in reducing the impact of hazards. Projects previously identified in the Plan were discussed to determine which of the projects had enough merit to be included in the updated Plan and to determine if the projects met the hazard mitigation needs of the County and jurisdictions. These projects were evaluated based on a preliminary evaluation of cost/benefit and priority based on either historical damages or anticipated damage. Consideration of prioritization also included possible future impacts due to climate variations and vulnerable and underserved populations. A *high* priority classification means the project should be implemented as soon as possible and would minimize losses at a very efficient rate. A *moderate* classification means the project should be carefully considered and completed after the high priority projects have been completed. A *low* priority means the project should not be considered in the near future. However, it is a potential solution and should not be eliminated until further evaluation can be completed. Such projects may be completed considering the failures of all other projects striving toward the same goal.

A timeframe for completion, oversight, funding sources, and any other relevant issues were addressed. These implementation strategies are geared toward the specific goal and area. Notes were added to some projects for further clarification. Often,

⁹⁹State of South Dakota Hazard Mitigation Plan. 2019

these projects will not encounter any resistance from environmental agencies, legal authorities, and political entities. Where these are a concern, address is made. Lawrence County has areas owned by both federal and state entities. Projects listed may require collaboration with these entities.

Lawrence County and all jurisdictions have planning mechanisms which can help to support mitigation strategies. A list of capabilities is listed below. All adopting jurisdictions have adopted and enforced building codes. It is acknowledged that building codes play an important role in mitigating many hazards. All adopting jurisdictions have room to expand and improve on their capabilities through various planning mechanisms such as updating zoning, zoning map revisions, updating ordinances, and either updating or annually reviewing their comprehensive plan. However, in many cases funding or personnel capacity to update planning mechanisms may be somewhat limited. Proper planning can help to reduce the impact of natural hazards on people, structures, and infrastructure. When updating any of these documents the mitigation goals and actions provided in this Plan should be reviewed to see how they can be incorporated into those plans and policies.

Mitigation Capabilities - Plans						
	Lawrence County	Central City	Deadwood	Lead	Spearfish	Whitewood
Comprehensive Plan	Yes	Yes	Yes	Yes	Yes	Yes
Community Wildfire Protection Plan	Yes	No	No	No	No	No
Capital Improvement Plan	Yes	Yes	Yes	No	Yes	No
Community Operation Plan	Yes	No	No	No	Yes	No
Environmental Review Plan	No	No	No	No	No	No
Local Emergency Operation Plan	Yes	No	Yes*	Yes*	No	No
Stormwater Management Plan	No	Yes	No	No	Yes	No

Table 5.1. Mitigation Capabilities Plans.

Mitigation Capabilities – Land Use and Ordinances						
	Lawrence County	Central City	Deadwood	Lead	Spearfish	Whitewood
Acquisition of land for open space/public use	Yes	Yes	Yes	Yes	Yes	Yes
Building Code	Yes	Yes	Yes	Yes	Yes	Yes
Flood Insurance Rate Maps	Yes	Yes	Yes	Yes	Yes	Yes
Substantial Damage Plan	Yes	No	Yes*	No	No	No
Natural Hazard Specific Ord.	No	No	No	No	No	No
Subdivision Ord.	Yes	Yes	Yes	Yes	Yes	Yes
Zoning Ord.	Yes	Yes	Yes	Yes	Yes	Yes

Table 5.2. Mitigation Capabilities Land Use and Ordinances. Note:* Covered under the County

Mitigation Capabilities – Administrative						
	Lawrence County	Central City	Deadwood	Lead	Spearfish	Whitewood
Chief Building Official	Yes	Yes	Yes	Yes	Yes	Yes
Civil Engineer	Yes^	No	Yes^	Yes^	Yes	No
Community Planner	Yes	No	Yes	Yes	Yes	No
Emergency Manager	Yes	Yes*	Yes*	Yes*	Yes*	Yes*
Floodplain Administrator	Yes	Yes	Yes	Yes	Yes	NA
Certified Floodplain Administrator	No	No	No	No	Yes	No
GIS Coordinator	Yes	No	Yes	No	No	No
Planning Commission	Yes	Yes	Yes	Yes	Yes	Yes
Membership with Black Hills Council of Local Governments	Yes	Yes*	Yes	Yes	Yes	Yes*

Table 5.3. Mitigation Capabilities Administration. Note:*Covered under the County ^Consultant

Mitigation Capabilities – Technical						
	Lawrence County	Central City	Deadwood	Lead	Spearfish	Whitewood
Grant Writing	No	Yes	Yes	Yes	No	No
Hazard Data & Info	No	Yes	Yes	Yes	Yes	No
GIS Analysis	Yes	No	Yes	No	Yes	No
Mutual Aid Agreements	Yes	Yes	Yes	Yes	Yes	Yes

Table 5.4. Mitigation Capabilities Technical. Some services such as GIS analysis, hazard data and info, and some grant programs can be provided through the County's membership with the Black Hills Council of Local Governments. Note:*Covered under the County

Mitigation Capabilities – Funding						
	Lawrence County	Central City	Deadwood	Lead	Spearfish	Whitewood
Capital Improvements Project Funding	Yes	No	Yes	Yes	Yes	No
Community Development Block Grant	No	Yes*	No*	No*	No*	No*
Federal (Non-FEMA Funding)	Yes	Yes	Yes	No	Yes	Yes
Water Fees	No	No	Yes	Yes	Yes	Yes
Sewer Fees	No	No	Yes	Yes	Yes	Yes
Gas/Electric	No	No	No	No	No	No

Impact Fees for New Development	No	No	No	No	No	No
State Funding Programs	No	Yes	Yes	Yes	Yes	Yes
Stormwater Utility Fee	No	No	No	Yes	No	No

Table 5.5. Mitigation Capabilities Funding. "*" CDBG Eligibility as of 11/2024. Check with local planning district: Black Hills Council of Local Governments for current eligibility status.

Mitigation Capabilities – Education and Outreach						
	Lawrence County	Central City	Deadwood	Lead	Spearfish	Whitewood
Community Newsletters	No	No	Yes	Yes	No	No
Hazard Awareness Campaigns	Yes	No	Yes	Yes	No	No
Local News	Yes	Yes	Yes	Yes	Yes	Yes
Organization Rep. to interact with vulnerable populations	No	No	No	Yes	No	No
Social media	Yes	No	Yes	Yes	Yes	No
Active 911 Alerting/CodeRed	Yes	Yes	Yes	Yes	Yes	Yes
County/City Website	Yes	No	Yes	Yes	Yes	Yes

Table 5.6. Mitigation Capabilities Outreach/Education.

*If a mitigation action lists multiple responsible jurisdictions, oversight is assigned to the corresponding jurisdiction unless otherwise specified.

Dam Failure

Goal 1: Reduce impact of dam failure in Lawrence County

Project 1.1	Continue to review inspection reports for High-Risk Dams
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	Ongoing –Inspections occur every five years
Oversight	Lawrence County Emergency Manager
Notes:	The County Emergency Manager is provided a copy of the High-Risk Dam reports for all dams that aren't federally owned.

Project 1.2	Appropriately regulate downstream hazards risk from high-risk dams when updating land uses.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	Ongoing –Inspections occur every five years
Oversight	County Emergency Manager, Central City Board President, Deadwood City Planner, Lead City Administrator, Spearfish Planning Director, Whitewood Mayor.
Notes	This can be considered during zoning or land use updates.

Project 1.3	Educate the community about dam failure risks and evacuation routes through workshops and informational campaigns.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	Med
Funding Source	NA – No cost aside from staff time
Timeframe	Ongoing –Inspections occur every five years
Oversight	County Emergency Manager, Central City Board President, Deadwood Mayor, Lead Mayor, Spearfish Planning Director, Whitewood Mayor
Notes	

Project 1.4	Support efforts to obtain and maintain a Satisfactory Rating for non-federal and state high-risk dams in Lawrence County.
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	FEMA-HHPDG
Timeframe	Ongoing –Inspections occur every five years
Oversight	County Emergency Manager
Notes	

Drought

Goal 2: Reduce impact of drought in Lawrence County

Project 2.1	Continue monitoring drought conditions throughout Lawrence County
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	Ongoing
Oversight	County Emergency Manager
Notes	Monitoring conditions can keep County/Towns informed should they need to inform the public of water usage, as well as higher risk for wildfire.

Project 2.2	Prepare a public information packet or share information to increase awareness of drought hazards and measures that may be taken to reduce health and safety risks.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	1-5 years
Oversight	County Emergency Manager, Central City Board President, Deadwood City Planner, Lead City Administrator, Spearfish City Administrator, Whitewood Finance Officer.
Notes	Monitoring conditions can keep county/municipalities informed should they need to inform the public of water usage and best-practices. Encourage the public to take water-saving measures when extra water is needed for irrigation, livestock, and fight fighting purposes.

Project 2.3	Evaluate the need for a larger or secondary water tank in Central City
Responsible Jurisdiction	Central City & Lead
Priority	High
Funding Source	Town/City General Funds, FEMA – HMGP, DANR - SRF
Timeframe	1-5 years
Oversight	Central Board President & Lead City Administrator*
Notes	Central City has potential concerns for potable water supply in the event of a water break. The town noted concerns that the current tank would not be an adequate size. A study would likely need to be conducted. The tank is owned by the City of Lead. This would also likely need to be a collaborative effort between the two cities. *Primary oversight.

Extreme Temperatures

Goal 3: Reduce impact of Extreme Temperatures in Lawrence County

Project 3.1	Identify and work with local organizations to provide outreach and support for vulnerable populations during extreme cold events.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	1-5 years
Oversight	County Emergency Manager, Central City Board President, Deadwood Police Chief, Lead City Administrator, Spearfish City Administrator, Whitewood Police Chief
Notes	Enhance the capacity and readiness of warming centers for extreme cold events. Part of the action will be identifying local organizations that can assist. Communities can work with County EM.

Project 3.2	Education and outreach to communities about the risks of extreme cold, including hypothermia and frostbite, and provide tips for staying warm and safe.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	1-5 years
Oversight	County Emergency Manager, Central City Board President, Deadwood Police Chief, Lead City Administrator, Spearfish City Administrator, Whitewood Police Chief
Notes	The county could expand on efforts by collaborating with municipalities on a countywide education campaign strategy. Posting information on websites, mailers through utilities, brochures, booths at community events, providing information as part of the building permit process. Collaborate with state and federal agencies on education materials. Special consideration should be given to outreach to vulnerable populations. Including different methods of providing information to these populations, such as churches, social media, senior centers, schools, daycares.

Project 3.3	Educate the community about heat-related health risks and promote strategies for staying cool, hydrated, and safe during high temperatures.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	NA – No cost aside from staff time

Timeframe	1-5 years
Oversight	County Emergency Manager, Central City Board President, Deadwood Police Chief, Lead City Administrator, Spearfish City Administrator, Whitewood Police Chief
Notes	The county could expand on efforts by collaborating with municipalities on a countywide education campaign strategy. Posting information on websites, mailers through utilities, brochures, booths at community events, providing information as part of the building permit process. Collaborate with state and federal agencies on education materials. Special consideration should be given to outreach to vulnerable populations. Including different methods of providing information to these populations, such as churches, social media, senior centers, schools, daycares.

Flooding

Goal 4: Reduce impact of flooding in Lawrence County

Project 4.1	Continue compliance and participation in the National Floodplain Insurance Program (NFIP).
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	Ongoing
Oversight	Local Jurisdiction’s Floodplain Administrator
Notes	All participating jurisdictions participate in NFIP.

Project 4.2	Explore the feasibility of participating in the Community Rate System (CRS).
Responsible Jurisdiction	Deadwood
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	1-5 years
Oversight	Local Jurisdiction’s Floodplain Administrator
Notes	

Project 4.3	Continue participation in the CRS program.
Responsible Jurisdiction	Spearfish
Priority	Med
Funding Source	NA – No cost aside from staff time
Timeframe	5 years
Oversight	Floodplain Administrator
Notes	Spearfish noted they currently have limited capability to expand on the Community Rate System to level 8 but will consider it if it becomes feasible. Will continue to re-evaluate the feasibility during the time of re-certification.

Project 4.4	Review and consider the need for updating the current floodplain ordinance.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish
Priority	High
Funding Source	NA – No cost aside from staff time
Timeframe	5 years
Oversight	Local Jurisdiction’s Floodplain Administrators
Notes	Spearfish is currently working on updates to their ordinance. As of 2025, the draft was being reviewed by FEMA. The city hopes to have the updated ordinance approved in 2025.

Project 4.5	Have two certified floodplain administrators.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish
Priority	High
Funding Source	FEMA – Floodplain Administrator Training
Timeframe	1-5 years
Oversight	Local Jurisdiction’s Floodplain Administrator
Notes	FEMA has funding available for floodplain administrator training. Some communities may still have capability or staff time limitations for sending staff to training.

Project 4.6	Conduct a hydraulic analysis to evaluate the areas in the western portion of town.
Responsible Jurisdiction	Central City
Priority	High
Funding Source	Town General Funds, FEMA – HMGP
Timeframe	1-5 years
Oversight	Board President
Notes	Central City’s Drainage Evaluation Report notes the need to conduct an H&H study to complete the design of a drainage project to address concerns on the western side of town. As per the report, the study should include Golden Gate Street and adjacent property, and the area from Highway 14A which drains to Golden Gate Street.

Project 4.7	Consider alternative projects outlined in the Central City Drainage Evaluation Report to help address drainage issues in the western side of town (Golden Gate Street).
Responsible Jurisdiction	Central City
Priority	High
Funding Source	Town General Funds, FEMA – HMGP, DANR - SRF
Timeframe	1-5 years
Oversight	Board President
Notes	Central City’s Drainage Evaluation Report notes the potential projects: Storm sewer infrastructure and concrete plan, concrete curb and gutter placement, or a combination of both.

Project 4.8	Explore options for working with property owners to mitigate flood risk for existing structures located in special flood hazard areas.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish
Priority	High
Funding Source	FEMA-HMGP
Timeframe	1-5 years
Oversight	Emergency Manager, Central City Board President, Deadwood Planning Director, Lead City Administrator, Spearfish City Administrator
Notes	Mitigation actions may include acquisition, elevation, or relocation of properties. This project would require collaboration with homeowners located in the floodway.

Project 4.9	Continue to provide education on flooding mitigation and preparedness and explore ways to expand on education outreach.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	Emergency Manager, Central City Board President, Deadwood Planning Director, Lead City Administrator, Spearfish City Administrator, Whitewood Finance Officer

Notes	The County could expand on efforts by collaborating with municipalities on a countywide education campaign strategy. Posting information on websites, mailers through utilities, brochures, booths at community events, providing information as part of building permit process. Collaborate with state and federal agencies on education materials. Special consideration should be given to outreach to vulnerable populations.
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Project 4.10	Encourage the development of open/green space within floodplain to protect riparian areas.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Spearfish
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	Planning Director, Central City Board President, Deadwood Planning Director, Spearfish Planning Director
Notes	

Project 4.11	Continue to identify new technology that enhances warning capability.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	County Emergency Manager, Central City Board President, Deadwood Police Chief, Lead City Administrator, Spearfish City Administrator, Whitewood Police Chief.
Notes	

Project 4.12	Work with USGS to identify areas that would benefit from Metwarn System.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	Emergency Manager, Central City Board President, Deadwood Planning Director, Lead City Administrator, Spearfish Planning Director, Whitewood Sheriff
Notes	USGS has developed the Metwarn System to provide early warning flood gauges in flash flood prone area. The system provides for an inexpensive partnership with Lawrence County.

Project 4.13	Continue working towards the separation of sewer and stormwater.
Responsible Jurisdiction	Lead
Priority	High
Funding Source	City general funds, Staff time, DANR-SRF, FEMA HMGP
Timeframe	1-5 years (ongoing)
Oversight	Lead City Planner
Notes	

Project 4.14	Explore the feasibility of updating stormwater requirements for design to include 100-year events.
Responsible Jurisdiction	Spearfish
Priority	High
Funding Source	City general funds, Staff time
Timeframe	1-5 years (ongoing)
Oversight	City Engineer
Notes	

Project 4.15	Coordinate with Irrigation Companies on diversion structure repair.
Responsible Jurisdiction	Spearfish
Priority	High
Funding Source	Staff time
Timeframe	1-5 years
Oversight	City Engineer
Notes	Continue to work with Irrigation Ditch Companies on improving structures, including improving the Nash Street diversion structure.

Project 4.16	Install and/or upsize storm water infrastructure from Ames Street to South of Iris Street to collect Hungry Hollow flows.
Responsible Jurisdiction	Spearfish
Priority	High
Funding Source	City general funds, FEMA-HMGP
Timeframe	1-5 years (ongoing)
Oversight	City Engineer
Notes	

Project 4.17	Continue planning mitigation efforts to help prevent flood damage and loss along Spearfish Creek.
Responsible Jurisdiction	Spearfish
Priority	High
Funding Source	City general funds, FEMA-HMGP
Timeframe	1-5 years (ongoing)
Oversight	City Engineer
Notes	This project would also require collaboration with SD DOT. Part of this project would include dredging materials and replacing intake structure at Maurice Dam. Dredging of materials and protecting city irrigation intake from erosion.

Project 4.18	Create an emergency response plan for the city.
Responsible Jurisdiction	Spearfish
Priority	High
Funding Source	City general funds, Staff time
Timeframe	1-5 years (ongoing)
Oversight	City Administrator
Notes	It is acknowledged this is not entirely mitigation and leans more towards preparedness and response.

Project 4.19	Explore options to help to prevent False Bottom creek from impacting the sewage lagoon.
Responsible Jurisdiction	St. Onge
Priority	High
Funding Source	DANR-SRF, FEMA HMGP, USDA RD
Timeframe	1-5 years
Oversight	Township Board President
Notes	The lagoon currently utilized a levee as a protection measure. It is encouraged to continue maintaining the levee for continued protection. But for long-term sustainability, other options should be explored such as improvements to the lagoon itself.

Geological

Goal 5: Reduce impact of Geological Hazards in Lawrence County

Project 5.1	Continue monitoring and recording locations with geologic hazards such as expansive soils and landslides.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead City Administrator, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 5.2	Continue to review and update land uses and zoning to discourage development in known landslide risk areas.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead City Administrator, Spearfish Planning Director
Notes	

Project 5.3	Identify and map locations with higher susceptibility to geological hazards.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead City Administrator, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 5.4	Develop and distribute educational materials and public awareness campaigns to inform residents about geological hazard risks.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead City Administrator, Spearfish Planning Director, Whitewood Finance Officer
Notes	Explore feasibility of providing information of risk communication through development/building permitting and land use designation. Distribution can be through social media, county/city's website, or community events. The county and cities may work to collaborate efforts for a county with an educational campaign.

Project 5.5	Conduct a city-wide retaining wall survey to identify ownership and prioritize repair and maintenance.
Responsible Jurisdiction	Lead
Priority	High
Funding Source	City general funds, Staff time, FEMA HMGP
Timeframe	1-5 years
Oversight	Lead Building Inspector
Notes	

Project 5.6	Develop a strategy to address privately owned retaining walls which protect public critical infrastructure (roads and utilities)
Responsible Jurisdiction	Lead
Priority	High
Funding Source	City general funds, Staff time, FEMA HMGP
Timeframe	1-5 years
Oversight	Lead Building Inspector
Notes	

High/Severe Wind

Goal 6: Reduce impact of High/Severe Wind in Lawrence County

Project 6.1	Continue to review, update and enforce building codes to ensure new construction is designed to withstand local hazards.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time, FEMA HMGP
Timeframe	1-5 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	This action can help mitigation numerous natural hazards.

Project 6.2	Continued training and certification for code enforcement for building codes.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time, FEMA HMGP
Timeframe	1-5 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	This action can help mitigate numerous natural hazards.

Project 6.3	Explore the need for technology upgrades for activities such as electric permitting or virtual inspection technology.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time, FEMA HMGP
Timeframe	1-5 years

Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	This action can help mitigate numerous natural hazards.

Project 6.4	Continue to encourage the removal of dilapidated structures.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City general funds, Staff time
Timeframe	1-5 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	This action can help mitigate numerous natural hazards.

Summer Storm

Goal 7: Mitigate the effects of Summer Storm in Lawrence County.

Project 7.1	Continue to support the burial of powerlines throughout the county.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	FEMA-HMGP,
Timeframe	Ongoing (continue 1-5 years)
Oversight	County Emergency Manager, Butte Electric, Black Hills Energy
Notes	Backup power to critical facilities can ensure services are still available to those that need them. While powerline burial is a more effective mitigation action, it can be very costly and is often an action taken by private companies. Neither the county nor the municipalities own or operate power. The burial of powerlines would need to be a joint effort with the community and the local electric company.

Project 7.2	Explore the feasibility of using impact-resistant materials for roofs, windows, and siding for new or updated public facilities.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	FEMA-HMGP,
Timeframe	Ongoing (continue 1-5 years)
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 7.3	Continue to equip critical facilities with backup generators to lessen impacts due to power loss.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City General Funds, FEMA-HMGP, Homeland Security Grant
Timeframe	Ongoing (continue 1-5 years)
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 7.3	Develop and distribute educational materials and public awareness campaigns to inform residents about summer storm risks.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	FEMA-HMGP,
Timeframe	Ongoing (continue 1-5 years)
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	Explore feasibility of providing information of risk communication through development/building permitting and land use designation. Distribution can be through social media, county/city's website, or community events. The county and cities may work to collaborate efforts for a county with an educational campaign.

Tornados

Goal 8: Reduce the impact of Tornados in Lawrence County.

Project 8.1	Develop and distribute educational materials and public awareness campaigns to inform residents about summer storm risks.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	FEMA-HMGP,
Timeframe	Ongoing (continue 1-5 years)
Oversight	Emergency Manager, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 8.2	Retrofit existing buildings or construct a saferoom to be used as shelter against tornados.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	FEMA-HMGP,
Timeframe	Ongoing (continue 1-5 years)
Oversight	Emergency Manager, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	There is no designated tornado shelter in Lawrence County. It was a concern brought up by residents, especially for vulnerable populations with no means of shelter. The community is encouraged to think of other ways to create a shelter such as a building with dual purpose or retrofitting an existing building.

Project 8.3	Develop and distribute educational materials and public awareness campaigns to inform residents about tornado risks.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	FEMA-HMGP,
Timeframe	Ongoing (continue 1-5 years)
Oversight	Emergency Manager, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	Explore feasibility of providing information of risk communication through development/building permitting and land use designation. Distribution can be through social media, county/city's website, or community events. The county and cities may work to collaborate efforts for a county with an educational campaign.

Wildfire

Goal 9: Reduce the impact of Wildfire in Lawrence County.

Project 9.1	Explore different methods and media to provide public information on FireWise practices.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County or City General Funds
Timeframe	Ongoing (continue 1-5 years)
Oversight	County Emergency Manager, Central City Board President, Deadwood Fire Chief, Lead City Administrator, Spearfish Fire Chief, Whitewood Police Chief
Notes	Work to get Firewise information to homeowners. Communities should consider different methods to share this information with the community. With special consideration to vulnerable populations, and different places and ways to reach out. Firewise materials can be obtained from the State OEM or BLM. The County and municipalities can create a collaborate education campaign. County's CWPP list action item: Public mailing may be provided to inform landowners about the Lawrence County Hazardous Fuels Cost-Share Program based on structure assessments. Firewise public service announcements will be broadcast on local radio stations.

Project 9.2	Adopt requirements for secondary access and egress for subdivisions of a certain size.
Responsible Jurisdiction	Deadwood
Priority	High
Funding Source	City General Funds, Staff time
Timeframe	1-2 years
Oversight	City Planner
Notes	Deadwood does not currently require secondary access and egress for subdivisions. Secondary routes can provide alternative routes in the event of emergencies. Requiring them during the subdivision process can help to alleviate the challenges of adding access and egress after development has occurred.

Project 9.3	Consider including survivable space requirements in planning and zoning ordinances.
Responsible Jurisdiction	Deadwood
Priority	High
Funding Source	City General Funds, Staff time
Timeframe	1-2 years
Oversight	City Planner
Notes	

Project 9.4	Promote the use of fire resistive building practices.
Responsible Jurisdiction	Deadwood
Priority	High
Funding Source	City General Funds, Staff time
Timeframe	1-2 years
Oversight	City Planner
Notes	Consider including FireWise information as part of the building permitting process. County's CWPP list action item: Public mailing may be provided to inform landowners about the Lawrence County Hazardous Fuels Cost-Share Program based on structure assessments. Firewise public service announcements will be broadcast on local radio stations.

Project 9.7	Continue collaboration efforts between departments and agencies with SD OEM, BLM, USFS, Local Fire Departments, SD Wildland Fire, SD Forestry and Conservation District, and private landowners for fuels reduction.
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	County General Funds, Staff time
Timeframe	1-5 years
Oversight	Emergency Manager
Notes	County's CWPP recommendation: Water sources should be developed to provide a usable water supply for fire suppression crews.

Project 9.8	Utilize the County's Community Wildfire Protection Plan's data on identified areas of treatment for critical facilities.
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	County General Funds, Staff time
Timeframe	1-2 years
Oversight	Emergency Manager*, Fire Chiefs, Planning Director
Notes	County's CWPP recommendation: Treatment areas need to receive treatments which would significantly reduce the threat of a stand replacement type fire within the identified treatment areas.*Primary oversight.

Project 9.9	Utilize the County's Community Wildfire Protection Plan's data on identified areas of treatment for primary ingress/egress.
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	BLM Grant Funds, Staff time
Timeframe	1-2 years
Oversight	Lawrence County Emergency Manager*, Fire Chiefs
Notes	County's CWPP recommendation: Primary ingress/egress road in Lawrence County have been identified and should be treated to provide safe access during emergency events. The County has a contractor which will evaluate properties fire risk. More information can be found the County's website: https://lawrence.sd.us/ . *Primary oversight.

Project 9.10	Explore funding options to assist VFDs in updating equipment and apparatus.
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	FEMA: Assistance to Firefighter Grant
Timeframe	1-2 years
Oversight	Lawrence County Emergency Manager
Notes	VFD can apply for the FEMA Assistance to Firefighter Grant.

Project 9.11	Ensure regular updates of the Lawrence County's Community Wildfire Protection Plan
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	FEMA, USFS Wildfire Grant, BLM
Timeframe	5-10 years
Oversight	Lawrence County Emergency Manager
Notes	The county last updated the CWPP in 2022

Project 9.12	Continue to maintain GIS data for structures in the county, using 911 addressing
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	County General Funds, Staff time
Timeframe	5-10 years
Oversight	Lawrence County GIS Coordinator
Notes	

Project 9.12	Continue to collaborate with Federal and State plan updates on natural resource management and other plans associated with wildfire that impact Lawrence County.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County General Funds, Staff time
Timeframe	5-10 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 9.12	Update ordinances to require secondary access/egress for certain sized developments.
Responsible Jurisdiction	Deadwood
Priority	High
Funding Source	City General Funds, Staff time
Timeframe	1-2 years
Oversight	Planning Director
Notes	

Project 9.13	Identify subdivisions that have access/egress limitations and establish a plan to correct deficiencies.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County General Funds, Staff time
Timeframe	5-10 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 9.14	Improve and develop water sources to guarantee that firefighting groups have both access to water and the ability to quickly locate these sources.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County General Funds, Staff time
Timeframe	5-10 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Planning Director, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 9.15	Continue to require fire protection measures for new subdivisions such as central water systems, dry hydrants, etc...
Responsible Jurisdiction	Lawrence County
Priority	High
Funding Source	No-cost – Staff time
Timeframe	Ongoing
Oversight	Planning Director
Notes	The county last updated the CWPP in 2022

Project 9.16	Continue developing a listing of usable water sources and installing dry hydrants in subdivisions lacking fire protection measures.
Responsible Jurisdiction	Lawrence County Fire Districts
Priority	High
Funding Source	Fire District General Funds
Timeframe	Ongoing
Oversight	Fire Chiefs
Notes	Each fire department district is responsible for developing a list of water sources usable to fight fires in their own district and they are also responsible for installing dry hydrants into ponds and dams for future water sources for fighting fires.

Winter Storm

Goal 10: Reduce the impact of Winter Storms throughout Lawrence County

Project 10.1	Equip critical facilities with backup generators to ensure services can continue during power outages.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City General Funds, FEMA HMGP
Timeframe	1-5 years
Oversight	County Emergency Manager, Central City Board President, Deadwood Fire Chief, Lead City Administrator, Spearfish City Administrator, Whitewood Finance Officer
Notes	

Project 10.2	Continue to review, update, and enforce building codes to the appropriate snow loads and ice loads for the region.
Responsible Jurisdiction	Lawrence County, Central City, Deadwood, Lead, Spearfish, Whitewood
Priority	High
Funding Source	County/City General Funds, FEMA HMGP
Timeframe	1-5 years
Oversight	County Planning Director, Central City Board President, Deadwood Planning Director, Lead Building Inspector, Spearfish Planning Director, Whitewood Finance Officer
Notes	

Project 10.3	Explore options for an emergency shelter for residents and visitors in Lead.
Responsible Jurisdiction	Lead
Priority	Low
Funding Source	City general funds
Timeframe	1-5 years
Oversight	City Administrator
Notes	The City of Lead does not currently have a designated storm shelter that can be used to provide shelter in the event of prolonged power outages. The Lead City Hall has the potential to be used as a temporary shelter but isn't designed for long-term sheltering. *This shelter would not be built or designed as a tornado shelter.

PRIORITIZATION OF MITIGATION ACTIVITIES

Requirement 201.6(d)(3)(iii)) ... Does the plan contain an action plan that describes how the actions identified will be prioritized, implemented, and administered by each jurisdiction?

C4-b. The plan must describe the criteria used for prioritizing the implementation of the actions.

Lawrence County and its jurisdictions had specific goals in mind which they were trying to achieve to mitigate risks. Those communities prioritized projects based on the number of people who would benefit from the project, future weather patterns, underserved and vulnerable populations, and the estimated or approximate total project cost. Some projects may be too large of an undertaking and therefore those

projects were moved down the priority list. The Plan participants discussed projects in regard to benefit-cost analysis that would be required at the time of application and the Plan author advised specific details of each project that could be analyzed in closer detail during the application period. Consideration was also given to projects that could either impact or provide benefit to vulnerable or underserved populations.

Requirement 201.6(c)(3)(iii))... Does the plan contain an action plan that describes how the actions identified will be prioritized, implemented, and administered by each jurisdiction?

C5-a. The plan must describe the criteria used for prioritizing the implementation of the actions. The criteria must include an emphasis on the extent to which benefits are maximized, in relation to the associated costs of the action.

C5-b The action plan must identify who is responsible for administering each action, along with the action's potential funding source and expected time frames for completion.

IMPLEMENTATION OF MITIGATION ACTIONS

Upon adoption of the updated Plan, each jurisdiction will become responsible for implementing its own mitigation actions. Those who do not participate or adopt the Plan will be required to coordinate all mitigation actions with the County. The planning required for implementation is the sole responsibility of the local jurisdictions that have participated in the Plan update. Some municipalities indicated that they do not have the financial capability to move forward with projects identified in the Plan at this time, however,

they will consider applying for funds through the State and federal agencies once such funds become available. When the municipalities are able to secure funding for the mitigation projects, they will move forward with the projects identified.

Lawrence County: Lawrence County has a full-time Emergency Manager and an Administrative Assistant. The County also has four full-time workers in the planning department as well as a full-time director of equalization which also serves as the GIS coordinator. Lawrence County also has an active and engaged Planning Commission which meets twice a month – most months. Lawrence County has a comprehensive plan, zoning, building codes, and various other ordinances in place which serve to help mitigate various natural hazards. The County updates ordinances as needed and will consider mitigation actions outlined in this plan during updates of technical documents, plans, and ordinances. Lawrence County is also a member of the regional planning district, Black Hills Council of Local Governments. This entity can assist the County and towns within by providing planning assistance such as drafting ordinance, zoning, and comprehensive plan updates. This organization can also assist with

applications for potential funding and grant programs which can be used to help complete some mitigation actions presented.

Gaming revenues are a somewhat unique funding source to Lawrence County. These revenues are distributed to Lawrence County, Lawrence County School District, South Dakota Department of Transportation, South Dakota General Fund, South Dakota Historical Preservation, and the City of Deadwood. In 2022, the total revenue was \$21,947,861 in governmental funds and \$3,898,781 in business funds.¹⁰⁰

Central City: Central City is a smaller town with limited capabilities both in staffing and finances. The town has a part-time finance officer and no full-time staff. Due to the limited staff capacity Central City's Board Members often volunteer in various roles when needed. In most cases someone from the town board would volunteer or be appointed to implement mitigation actions. Central City does have planning tools including a comprehensive plan, zoning, and various ordinances. The town board members also serve as the planning commission. As part of Lawrence County's membership, Central City also benefits from the services of the local planning district, Black Hills Council of Local Governments.

Deadwood: The City of Deadwood has full-time staff members, including under the Planning and Zoning Department: Planning, Zoning and Historic Preservation Officer, Building Inspector, and Zoning Coordinator. The Planning Department also serves as the GIS coordinator for the city. Deadwood employs various positions under the Finance Officer, Fire Department, Library, Parking and Transportation, Parks, Recreation and Events, Police Department, and Public Works. The city also has a planning commission. The city also has a comprehensive plan, zoning ordinances, floodplain ordinance, capital improvements plan, and various other ordinances which can help mitigate natural hazards. The city is also a member of the local planning district, Black Hills Council of Local Governments. Deadwood also has a somewhat unique funding source from gaming revenues. With these funds the city has been able to replace and upgrade roughly 80% of all major sewer and water lines.

Lead: The City of Lead has full-time staff members. Lead recently added a planning position with a full-time planner. The city also has a full-time building inspector, finance officer, city administrator, and public works department. Lead also has a Planning and Zoning Commission which meets bi-monthly. The city also has a comprehensive plan, zoning ordinances, floodplain ordinance, capital improvements plan, and various other ordinances which can help mitigate natural hazards. The city is also a member of the local planning district, Black Hills Council of Local Governments. Lead is currently working on the update of the city's comprehensive plan which it has worked on in conjunction with this Mitigation Plan update. Lead has also been working through updates of the city's ordinances. As part of these updates, Lead does consider mitigation actions.

Spearfish: The City of Spearfish has full-time staff members, including under Building and Development: Planning, City Engineer, and Building Inspector. Spearfish employs various positions under the Finance Officer, Fire Department, Library, Parking and Transportation, Parks, Recreation and Events, Police Department, and Public Works. Spearfish also has a planning commission and various planning mechanisms: comprehensive plan, zoning ordinances, floodplain ordinance, capital improvements plan, and various other ordinances which can help mitigate natural hazards. Spearfish is also a member of the local planning district, Black Hills Council of Local Governments.

Whitewood: The City of Whitewood has full-time staff members, including a full-time building inspector, finance officer, and public works department. Whitewood also has a Planning and Zoning Commission. The city utilizes various planning mechanisms: comprehensive plan, zoning ordinances, floodplain ordinance, subdivision ordinance, and various other ordinances which can help mitigate natural hazards. Whitewood is also a member of the local planning district, Black Hills Council of Local Governments.

¹⁰⁰ City of Deadwood.

VI. PLAN MAINTENANCE PROCESS

Changes/Revisions to Introduction: The plan format was redone.

MONITORING, EVALUATING, AND UPDATING THE PLAN

Lawrence County and all the participating local jurisdictions thereof will incorporate the findings and projects of the Plan in all planning areas as appropriate. Periodic monitoring and reporting of the Plan are required to ensure the goals and objectives for the *Lawrence County Natural Hazard Mitigation Plan* are kept current and local mitigation efforts are being carried out.

Requirement 201.6(c)(4)(i)... *Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a five-year cycle)?*

- D2-a.** *The plan must identify how, when and by whom the plan will be tracked for implementation over its five-year cycle*
- D2-b** *The plan must identify how, when and by whom the plan will be assessed for effectiveness at achieving its stated purpose and goals*
- D2-c** *The plan must identify how, when and by whom the plan will be reviewed and revised at least once every five years.*

During the process of implementing mitigation strategies, Lawrence County, or communities within, may experience lack of funding, budget cuts, staff turnover, and/or a general failure to implement projects. These scenarios are not in themselves a reason to discontinue and fail to update the Natural Hazard Mitigation Plan. A good plan needs to provide for periodic monitoring and evaluation of its successes and failures and allow for appropriate changes to be made.

Annual Reporting Procedures

The Plan shall be reviewed annually, as required by the County's Emergency Manager, or as the situation dictates, such as following a disaster declaration. The Lawrence County Emergency Manager will review the Plan annually in February and ensure the following:

- The County elected body will receive an annual report and/or presentation on the implementation status of the Plan;
- The report will include an evaluation of the effectiveness and appropriateness of the mitigation actions proposed in the Plan based on the number of mitigation actions completed; and
- The report will recommend, as appropriate, any required changes or amendments to the Plan.
- The report will include budget needs for any upcoming projects that require local match.

Five Year Plan Review

Every five years the Plan will be reviewed, and a complete update will be initiated. All information in the Plan will be evaluated for completeness and accuracy based on new information or data sources. New property development activities will be added to the Plan and evaluated for impacts. New or improved sources of hazard related data will also be included.

In future years, if Lawrence County relies on grant dollars to hire a contractor to write the mitigation Plan update, the County will initiate the process of applying for and securing such funding in the third year of the Plan to ensure the funding is in place by the fourth year of the Plan. The fifth year will then be used to write the Plan update, which in turn will prevent any lapse in time where the County does not have a current approved Plan on file.

The goals, objectives, and mitigation strategies will be readdressed and amended as necessary based on new information, additional experience, and the implementation progress of the Plan. The approach to this Plan update effort will be essentially the same as the one used for the original Plan development.

Lawrence County's Emergency Manager will meet with the Lawrence County Commission and Plan participants for review and approval prior to final submission of the updated Plan.

Plan Amendments

Plan amendments will be considered by Lawrence County's Emergency Manager, during the Plan's annual review, to take place in February. All affected local jurisdictions (towns and county) will be required to hold a public hearing and adopt the recommended amendment by resolution prior to considerations by the steering committee.

INCORPORATION INTO EXISTING PLANNING MECHANISMS

Requirement 201.6(c)(4)(ii). *Does the plan describe a process by which each community will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvements plans, when appropriate?*

- D3-a.** *The plan must describe the community's process to integrate the plan's data, information, and hazard mitigation goals and actions into other planning mechanisms.*
- D3-b** *The plan must identify the local planning mechanisms where hazard mitigation information/actions may be integrated. The identified list of planning mechanisms must be applicable to the plan participant(s) and not contradict the identified capabilities.*
- D3-c** *A multi-jurisdictional plan must describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms.*

Lawrence County and all incorporated communities have Comprehensive Plans and zoning. The plan author cannot specify which elements from the 2018 Lawrence County Mitigation Plan were included in the updated documents, or if any were included at all for all jurisdictions. Lawrence County has a recently updated comprehensive plan, which is reviewed annually, with a major review done every five years. The county is currently working on its future land use map as part of an amendment to this plan. Lawrence County and all incorporated the community's update ordinances and zoning as needed and considered mitigation actions as part of these updates. As of 2025, the cities of Lead and Spearfish both completed an update of their comprehensive plans. Both Spearfish and Lead engaged in discussions as part of updating their mitigation plan and integrated them into their comprehensive plan updates. The cities of Central City, Deadwood, and Whitewood also have comprehensive plans but do not have any plans for a major update at this time. Deadwood's Planning and Zoning Commission does conduct an annual review of the Deadwood Comprehensive Plan. Lawrence County and the jurisdictions will consider the mitigation requirements, goals, actions, and projects when it considers and reviews the other existing planning documents such as the comprehensive plans or ordinance updates. Mitigation projects will be considered and prioritized in conjunction with non-mitigation projects, such as water and wastewater infrastructure improvements, and new constructions of schools, libraries, parks, roads, etc.

Additionally, municipalities are required by State law to prepare budgets for the upcoming year and typically consider any expenditure for the upcoming year during that time. South Dakota Codified Law 9-21-2 provides that:

The governing body of each municipality shall, no later than its first regular meeting in September of each year or within ten days thereafter, introduce the annual appropriation ordinance for the ensuing fiscal year, in which it shall appropriate the sums of money necessary to meet all lawful expenses and liabilities of the municipality....an annual budget for these funds shall be developed and published no later than December thirty-first of each year.

Potential Funding Sources

Although all mitigation techniques will likely save money by avoiding losses, many projects are costly to implement. The Potential Funding Sources section was included so the local jurisdictions can work towards securing funding for the projects. Inevitably, due to the small tax base and small population for some of the participating jurisdictions, they may not have the ability to generate enough revenue to support anything beyond the basic needs of the community. This is why many of the mitigation actions are focused on planning mechanisms, such as enforcing ordinances, that do not cost anything.

Lawrence County and its jurisdictions will continue to seek outside funding assistance for mitigation projects in both the pre- and post-disaster environment. Primary Federal and State grant programs have been identified and briefly discussed, along with local and non-governmental funding sources, as a resource for the local jurisdiction

Federal: The following federal grant programs have been identified as funding sources which specifically target hazard mitigation projects:

Title: Flood Mitigation Assistance Program Agency: Federal Emergency Management Agency
FEMA's Flood Mitigation Assistance program (FMA) provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program (NFIP). FMA was created as part of the National Flood Insurance Reform Act of 1994 (42 USC 4101) with the goal of reducing or eliminating claims under the NFIP. FMA is a Natural Hazard grant program and is available to states on an annual basis. This funding is available for mitigation planning and implementation of mitigation measures only and is based upon a 75% Federal share/25% non-Federal share. States administer the FMA program and are responsible for selecting projects for funding from the applications submitted by all communities within the state. The state then forwards selected applications to FEMA for an eligibility determination. Although individuals cannot apply directly for FMA funds, their local government may submit an application on their behalf.
Title: Hazard Mitigation Grant Program Agency: Federal Emergency Management Agency
The Hazard Mitigation Grant Program (HMGP) was created in November 1988 through Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP assists states and local communities in implementing long-term mitigation measures following a Presidential disaster declaration. To meet these objectives, FEMA can fund up to 75% of the eligible costs of each project. The state or local cost-share match does not need to be cash; in-kind services or materials may also be used. With the passage of the Hazard Mitigation and Relocation Assistance Act of 1993, federal funding under the HMGP is now based on 15% of the federal funds spent on the Public and Individual Assistance programs (minus administrative expenses) for each disaster. The HMGP can be used to fund projects to protect either public or private property, so long as the projects in question fit within the state and local government's overall mitigation strategy for the disaster area and comply with program guidelines. Examples of projects that may be funded include the acquisition or relocation of structures from hazard-prone areas, the retrofitting of existing structures to protect them from future damages, and the development of state or local standards designed to protect buildings from future damages.

Eligibility for funding under the HMGP is limited to state and local governments, certain private non-profit organizations or institutions that serve a public function, Native-American tribes, and authorized tribal organizations. These organizations must apply for HMPG project funding on behalf of their citizens. In turn, applicants must work through their state since the state is responsible for setting priorities for funding and administering the program.

Title: Public Assistance (Infrastructure) Program, Section 406
Agency: Federal Emergency Management Agency

FEMA's Public Assistance Program, through Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, provides funding to local governments following a Presidential Disaster Declaration for mitigation measures in conjunction with the repair of damaged public facilities and infrastructure. The mitigation measures must be related to eligible disaster related damages and must directly reduce the potential for future, similar disaster damages to the eligible facility. These opportunities usually present themselves during the repair or replacement efforts.

Proposed projects must be approved by FEMA prior to funding. They will be evaluated for cost effectiveness, technical feasibility, and compliance with statutory, regulatory, and executive order requirements. In addition, the evaluation must ensure that the mitigation measures do not negatively impact a facility's operation or risk from another hazard.

Public facilities are operated by state and local governments, Native-American tribes or authorized tribal organizations and include:

Roads, Bridges & Culverts	Water, Power & Sanitary
Draining & Irrigation Channels	Airports & Parks
Schools, City Halls & Other Buildings	

Private nonprofit organizations are groups that own or operate facilities that provide services otherwise performed by a government agency and include, but are not limited to the following:

Universities and Other Schools	Power Cooperatives & Utilities
Custodial Care & Retirement Facilities	Hospitals & Clinics
Volunteer Fire & Ambulance	Museums & Community Centers

Title: SBA Disaster Assistance Program
Agency: US Small Business Administration

The SBA Disaster Assistance Program provides low-interest loans to businesses following a Presidential disaster declaration. The loans target businesses to repair or replace uninsured disaster damages to property owned by the business, including real estate, machinery and equipment, inventory, and supplies. Businesses of any size are eligible, along with non-profit organizations' loans which can be utilized by their recipients to incorporate mitigation techniques into the repair and restoration of their business.

Title: Community Development Block Grants
Agency: US Department of Housing and Urban Development

The Community Development Block Grant (CDBG) program provides grants to local governments for community and economic development projects that primarily benefit low- and moderate-income people. The CDBG program also provides grants for post-disaster hazard mitigation and recovery following a Presidential Disaster Declaration. Funds can be used for activities such as acquisition, rehabilitation or reconstruction of damaged properties and facilities and for the redevelopment of disaster areas.

State:

Title: Consolidated Water Facilities Construction Program
Agency: Department of Agriculture and Natural Resources (DANR)

The CWFCP program provides grants to local governments for drinking water and wastewater infrastructure projects that provide safe drinking water and sanitary sewer service to residents. Grants up to \$2,000,000 are awarded to eligible applicants. Cities, Counties, Water Districts, Sanitary Districts, and Rural Water Districts are eligible to apply. CWFCP funds are typically awarded at a percentage of total project cost and are often paired with loans from DANR's SRF Loan program.

Title: State Revolving Loan Fund (DWSRF and CWSRF)
Agency: Department of Agriculture and Natural Resources (DANR)

The SRF program provides low interest loans with extended terms to local governments for drinking water and wastewater infrastructure projects that include rehabilitation or replacement of existing infrastructure. Loans are awarded on ability to debt service and are sometimes given in the form of principle forgiveness. Cities, Counties, Water Districts, Sanitary Districts, and Rural Water Districts are eligible to apply. SRF funds are awarded quarterly.

Local: Local governments depend upon local property taxes as their primary source of revenue. These taxes are typically used to finance services that must be available and delivered on a routine and regular basis to the general public. If local budgets allow, these funds are used to match Federal or State grant programs when required for large-scale projects.

Non-Governmental: Another potential source of revenue for implementing local mitigation projects are monetary contributions from non-governmental organizations, such as private sector companies, churches, charities, community relief funds, the Red Cross, hospitals, Land Trusts, and other non-profit organizations.

CONTINUED PUBLIC PARTICIPATION/INVOLVEMENT

Requirement 201.6(c)(4)(iii)... Is there discussion of how each community will continue public participation in the plan maintenance process?

D1-a. The plan must describe how the participant(s) will continue to seek public participation after the plan has been approved and during the plan's implementation, monitoring, and evaluation.

During interim periods between the five-year update, efforts will be continued to encourage and facilitate public involvement and input. The Plan will be available for public view and comment at the Lawrence County Auditor's Office or online and the Black Hills Council of Local Governments office. Comments will be received in writing, by letter or by e-mail.

All ongoing workshops and training courses will be open to the public and appropriately advertised. Ongoing press releases and interviews will help disseminate information to the general public and encourage participation.

As implementation of the mitigation strategies continues in each local jurisdiction, the primary means of public involvement will be the jurisdiction's own public comment and hearing process. State law, as it applies to municipalities and counties, requires this as a minimum for many of the proposed implementation measures. Effort will be made to encourage cities, towns, and counties to go beyond the minimum required to receive public input and engage stakeholders such as social media. Lawrence County keeps an up to date and active Facebook page with an active following.

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Appendix A: Meeting Documentation

Lawrence County – Mitigation Planning Meeting (Lead Comprehensive Plan Meeting)

10/16/2023 – 12:00 Lead City Hall

[illegible]

10.16.23

BHCLG and Lead Planning Team met with key stakeholders to discuss economic development in Lead Comprehensive Plan. Part of the discussion also focused on mitigation in Lead.



Lead Comprehensive Planning Commission

Meeting Agenda for Thursday, October 19, 2023

11:00 AM Lead City Hall 801 W. Main St., Lead, SD

1. CALL TO ORDER
2. ROLL CALL, Establish a Quorum
3. APPROVE MINUTES OF September 21st MEETING [**ACTION**]
4. OLD BUSINESS
 - Continuing the preparations for the new Comprehensive Plan led by Kailey Snider, Black Hills Council of Local Governments.
 - Any follow up discussions.
 - Begin the compiling of the vision statement.
5. OTHER BUSINESS
6. SET NEXT REGULAR MEETING DATE (Thursday, November 16, 2023, 11:00 am at City Hall)
7. CALL FOR ADJOURNMENT [**ACTION**]

Lawrence County – Mitigation Planning Meeting (Lead Comprehensive Plan Meeting)

10/19/2023 – 11:00 Lead City Hall

[illegible]

10.19.23

BHCLG and Lead Planning Team met to discuss the update of the Lead Comprehensive Plan, including discussions on resiliency and future vision for the community.

LAWRENCE COUNTY
LOCAL EMERGENCY PLANNING COMMITTEE

Cheyenne Crossing, Lead, SD
October 26, 2023

NAME / REPRESENT

PHONE

E-MAIL

Conflict of
Interest declaration

Paul Thomson - LCEM

✓

Barb Baker LCEM

✓

Charles Fetter City of Deadwood
Deadwood Fire Dept

✓

Alex Hermann

ad. com
✓

COREY COMPTON

✓

Leah Stordle

✓

Brian Blenner

✓

Brad Richardson

RG
✓

DENNIS SCHUMACHER

✓

Robin Lucero - City of Lead

✓

RON MOELLER

com
✓

Brandy Petersen

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Barry VonSickler

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Ma Hhies Barlow - Spearfish Fire Dept

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LAWRENCE COUNTY
LOCAL EMERGENCY PLANNING COMMITTEE

Cheyenne Crossing, Lead, SD

October 26, 2023

NAME / REPRESENT

PHONE

E-MAIL

Conflict of
declaration

Ben Evans / Wharf

-Y ☒

Kailey Snyder / BHCLG

-Y ☒

Keith Sherburn / MWS

-Y ☒

Sadie Goodman / CSDEP

-Y ☐

Clint Finn Coeur d'Alene

-Y ☒

-Y ☐

-Y ☐

-Y ☐

-Y ☐

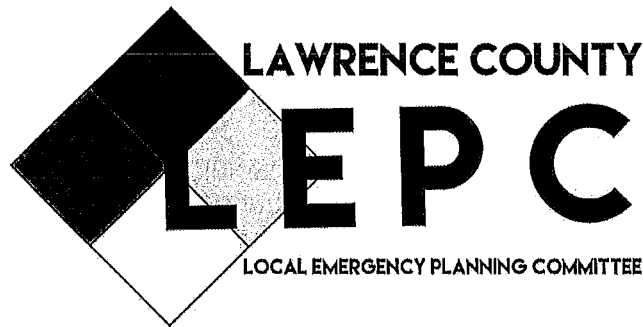
-Y ☐

-Y ☐

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-Y ☐

-Y ☐



The Lawrence County LEPC met in Spearfish at noon on October 26, 2023 at Cheyenne Crossing.

Present were: Paul Thomson, LEPC Secretary-Treasurer and LC EM; Barb Baker, LC EM; Barry VanSickle, Sanford Lab; Charles Fetter, Dwd FD; Alex Hamann, Dwd Fire Chief; Clint Finn, Couer-Wharf; Ben Evans Couer-Wharf; Corey Compton BHSU; Cathy Strudle Monument Health; Brian Blenner Monument Health; Ron Moeller, citizen; Brad Richardson SDDOH; Dennis Schumacher, City of Lead; Robin Lucero, City of Lead; Brandy Petersen, SDOEM; Matthias Barton, Neiman; Kailey Snyder, BHCLG; Sadie Goodman, CSDED; Keith Sherburn, NWS
All motions unanimously approved unless otherwise stated.

Secretary Paul Thomson , led the meeting in President Ken Hawki's absence.

Conflict of Interest Declarations: No Conflicts declared.

Minutes: Motion by Charles Fetter, 2nd by Brad Richardson to approve the July 20th minutes.
Motion passed.

Financial Report: Paul Thomson presented the following Treasurer's report:

Beginning balance checking:	\$1622.32
Expenses: 07/20 Pizza Ranch, Spearfish Mtg	<u>154.51</u>
Ending Balance:	\$1,467.81

Motion by Charles Fetter, 2nd by Ron Moeller to approve the financial report as presented.
Motion carried.

Haz Mat Business:

Spill Reports: Copies of each report were handed out.

1. 06/15/2023 – 55 gallons of oil – SD Science & Technology, Lead, SD
2. 08/23/2023 – 35 gallons E85 gasoline/diesel – Behind St Onge Bar
3. 09/13/2023 – 100 gallons MasterRoc SA160 – Thyssen Mining, Lead, SD
4. 09/27/2023 – 30 gallons hydraulic oil – Cable Communications – Spearfish
5. 10/11/2023 – Sediment from water line – Strawberry Creek&Bear Butte Creek

- **Haz Mat Discussion:** Paul reported the remaining LEPC funds for HazMat Materials will be approximately \$1,250. He and Charles Fetter will get together and decide on how to spend it.

Regular Business:

- **Sanford Lab Update:** Barry gave a progress report on Sanford Lab activities. They should be done excavating by February and 28 ongoing experiments. BH Underground campus makes copper. Currently the Ross Shaft is the main entrance. The ERT has their own EMT classes and they are specific trainings for that environment.
- **Couer-Wharf Update:** Clint Finn reported that they had just finished up with their annual refresher training.
- **Credentialing Update:** Barb Baker reported on the Salamander Credentialing program. Lawrence County held the Salamander training September 26th. She also did advise the printer is now up and running in the office.

Training: Barb Baker reported that there are no training courses currently in the area.

New Business:

Brad Richardson SDDOH advised that the POD plan is now up to date and he has been working with BHSU. Inventory will be done on the POD November 13th. The DOH and Paul Thomson will do that. They have tabled the POD manager application at this time. Ron Moeller has volunteered to take that position. Paul will get him added as a volunteer with Lawrence County as to which he will be covered under the WC insurance. Brad stated it is important to reach out the Frontline workers i.e.: EMS, PD, FF. He wants others to be working on transportation for out of towners.

Kailey Snyder – BHCLG Kailey said that she is working on the Pre Disaster Mitigation. The Grant has been approved and now the Plan will need to be approved by FEMA as well. They look at the Natural Hazards and the risk vulnerability in the area.

Paul passed around a Waiver of Notice for the July 2023 LEPC meeting. Also in the packet are copies of the Bi-Laws. Please look at the proposed amendments and we will vote on changes at the next meeting.

Attendee discussion / Notes:

Ron Moeller – 36 people attended the fire class held in Lead. He also commented on the 7-vehicle fire at Sunshine Towing and stated it was nice to have the combined effort between the Lead and Deadwood VFD's

Next meeting: January – Holiday Inn, the date will be determined.

AGENDA
REGULAR WHITEWOOD COUNCIL MEETING
November 6, 2023
5:30 PM – CITY HALL

1. CALL MEETING TO ORDER.
2. ROLL CALL
3. APPROVE MINUTES from Regular Meeting on October 16, 2023.
4. APPROVE THE CLAIMS.
5. HAZARD MITIGATION UPDATE & PROCEDURES- Kailey Snyder, BH Council
6. APPROVE THE CHANGE OF ZONING REQUEST FROM GR1 TO GR2 FOR LOTS 1-14, BLOCK 32, ORIGINAL TOWN, WITH AMENDMENT MADE BY PLANNING & ZONING- No Apartments.
7. APPROVE SPECIAL EVENT LIQUOR LICENSE FOR BULLWACKERS- Festival of Trees Nov 30th.
8. APPROVE PURCHASE OF 10 NEW TRASH CONTAINERS.
9. SALT SAND PRICE FOR FOREST ACRES & SPEARFISH MTN RANCH.
10. DEPARTMENT REPORTS.
 - Police Department Library Board Street Department
 - Water Department Finance Commission Liquor Commission
 - Sewer Department Parks Department Economic Development
 - ADA Commission Railroad Authority NH Waste Management
 - Emergency Management Historic Dist. Commiss.
11. PUBLIC COMMENTS.
12. NEXT REGULAR COUNCIL MEETING- Monday, November 20, 2023, at 5:30pm
13. ADJOURN

11/06/2023 – 5:30 City Hall

11/06/2023 – 5:30 City Hall

[illegible]

REGULAR WHITEWOOD COUNCIL MEETING**November 06, 2023**

The Whitewood City Council met in regular session on Monday the 6th of November 2023 at City Hall. Mayor Mitch Harmon called the meeting to order at 5:30 pm, with Council members Roxie Cooper, Michael Weyrich, Bruce White, Randy Wiege, Jerry Davidson, and Monica Burke. City Attorney Fitzgerald, Police Chief Bach, Building Official Smit, Public Works Werlinger and Asst. Finance Officer Bestgen were also present.

Action 2023-175

Motion by White, seconded by Wiege, to approve the minutes from the regular meeting on October 16, 2023. All members present voting yes, motion carried.

Action 2023-176

Motion by Burke, seconded by White, to approve the claims as presented. Roll call, all members present voting yes, motion carried.

CLAIMS- November 06, 2023**ESTIMATED WAGES – November 2023**

MAYOR	550.00
COUNCIL	2,700.00
CITY ATTORNEY	1,000.00
BUILDING INSPECTOR	300.00
CHIEF OF POLICE- Josh Bach	4,000.00
POLICE OFFICER- Anthony Spencer	3,120.00
POLICE OFFICER- Greg Meyer	3,360.00
POLICE ASSISTANT- Jim Smit	2,904.00
WASTE/WATER OPERATOR- DJ Werlinger	3,600.00
WASTE/WATER OPERATOR- Derek Daniels	3,520.00
LIBRARIAN – Tarah Mitchell	1,792.00
LIBRARY ASST.- Olyn Smith	108.00
FINANCE OFFICER – Cory Heckenlaible	3,960.00
FINANCE & PW- Jessica Bestgen	2,112.00
TOTAL	\$33,026.00

GENERAL LEDGER

SD DEPT REVENUE & REGULATION- Garbage Tax	346.53
SD RETIREMENT- Employee Retirement October	4,113.37
MAX ECKELMAN- Refund Deposit	50.00
TOTAL	\$4,459.90

GENERAL FUND

WASTE CONNECTIONS- Garbage Collection October	5,812.39
A&B BUSINESS SOLUTIONS- City Hall 204.07, Police 154.99	359.06
A&J SUPPLY- Streets 108.36, Shop 229.35, City Hall 47.15, Hale 31.62, Parks 52.92	469.40
ALL NET CONNECTIONS- Police 1001.75, Server Maintenance 75.00, Backup 207.60	1,284.35
AMAZON CAPITAL- Streets 369.87, Police 109.90	479.77
AT&T	387.16
BUTLER MACHINERY- Cutting Edges	515.84
EARTHWORM CONSTRUCTION- Sprinkler Blow Outs	550.00

GENE'S LOCK SHOP- Police Dept Door Lock	3,050.44
JOHNSON SOUTH DAKOTA- October Liquor	12,117.25
KERRY KAMPA- Cleaning	80.00
LIGHTING MAINTENANCE- Exit Lights	58.52
REPUBLIC NATIONAL- October Liquor	3,982.53
SOUTHERN GLAZERS- October Liquor	1,719.85
SPEARFISH ELECTRIC- Repair Library Mast	492.35
STURGIS RESPONDER SUPPLY- Streets	339.80
WARNE CHEMICAL- Ice Melt	169.00
WELLS FARGO VISA- Police 42.46, City Hall 21.23, Vision 70.88	134.57
BLUEPEAK- Shop	45.37
BJ'S COUNTRY STORE- City Hall 35.54, Police Fuel 599.02, PW Fuel 151.02	785.58
SONSET STATION- PW Fuel 162.18, Police Fuel 241.38	403.56
SPEARFISH AUTO- Streets	740.10
CHAIN SAW CENTER- Parks	36.53
FRIENDS OF WHITEWOOD CEMETERY	5,134.50
HAYWORTH ENTERPRISES- Hauling of Sand	1,530.00
QUIK SIGNS- Police Durango	442.42
TOTAL	\$41,120.34

LIBRARY

A&J SUPPLY	10.96
DEMCO- Shelves	1,695.82
KNECHTS- Alarms	114.98
WELLS FARGO VISA	1,164.93
WESTERN STATIONERS	7.98
WILLOW LANE EDUCATION- Books	110.94
A&B BUSINESS SOLUTIONS	83.06
TOTAL	\$1,706.78

WATER/SEWER FUNDS

A&J SUPPLY	109.21
DAKOTA PUMP- SCADA Update	7,442.68
POSTMASTER- Water Bill Postage	387.00
CENTURY LINK	82.01
WELLS FARGO VISA	76.90
RAPID DELIVERY	15.60
SONSET STATION- PW Fuel	162.18
BJ'S COUNTRY STORE- PW Fuel	151.02
TOTAL	\$8,426.60

AUTOMATIC PAYMENTS

USDA RURAL DEVELOPMENT- Water Project Loan	4,028.00
USDA RURAL DEVELOPMENT- Trunk Sewer Project	1,057.00
EFTPS- Payroll Taxes 10/20/23	3,575.56
EFTPS- Payroll Taxes 11/03/23	4,684.08
TOTAL	\$13,344.64

Kailey Snyder, with Black Hills Council of Local Governments, was present to inform the Council of the Lawrence County Hazard Mitigation Plans update process.

Action 2023-177

Motion by Wiege, seconded by Burke, to approve the Change of Zoning Request from GR1 to GR2 for Lots 1-14, Block 32, Original Town, with the amendment made by the Planning and Zoning Commission adding verbiage to eliminate apartments for this property. All members present voting yes, motion carried.

Action 2023-178

Motion by Davidson, seconded by Burke, to approve the Special Event Liquor license for Bullwackers Saloon and Steakhouse for the Festival of Trees on November 30, 2023. All members present voting yes, motion carried.

Action 2023-179

Motion by Wiege, seconded by White, to approve the purchase of 10 new trash totes from Uline for \$1,250.00. All members present voting yes, motion carried.

Action 2023-180

Motion by White, seconded by Wiege, to charge existing customers \$50.00 per ton and new customers \$200 per ton of salt/sand mixture, along with a \$10 handling fee per ton for loading, for the upcoming winter season, and that each entity must haul their own salt/sand mixture. Roll call, all members present voting yes, motion carried.

There being no further business, the meeting was adjourned at 5:47 PM.

MITCH HARMON
Mayor

Attest:

JESSICA BESTGEN
Assistant Finance Officer

1. Proposed Meeting Agenda And Information Packet

Documents:

14 NOVEMBER 2023 PROPOSED MEETING AGENDA.PDF
GB 1 EXECUTIVE ORDER CERTIFICATION.PDF
GB 2 2023 BOARD COMMITTEE REAPPOINTMENTS.DOCX
GB 3 PERSONNEL IS AND T.PDF
GB 3A PERSONEL AUDITOR.PDF
GB 3B CELL PHONE STIPENDS SHERIFF.PDF
GB 3C VOLUNTEER APPROVAL FOR WORK COMP RON MOELLER.PDF
GB 3D PERSONNEL SHERIFF.PDF
GB 3E PERSONNEL SHERIFF.PDF
GB 4 AUDITORS ACCOUNT WITH TREASURER (6).PDF
GB 5 ABATEMENT.PDF
PSSC PROJECT UPDATE (2).PDF
SALE OF ALCOHOLIC BEVERAGE APPLICATIONS.PDF
LAWRENCE COUNTY PDM UPDATE CONTRACT (1).PDF
VACATION OF SECTION LINE PETITION AND EXHIBIT.PDF
VACATION OF SECTION LINE VICINITY MAPS.PDF
NON-AGENDA CORRESPONDENCE 1 DANR NOTICE.PDF
NON-AGENDA CORRESPONDENCE 2 2023 FOREST PLANNING SYMPOSIUM
FLYER.PDF
HIGHWAY 1 STAFF REPORT NOV 14.PDF
HIGHWAY BUSINESS 2 SECTION LINE STATUTES.DOCX
HIGHWAY BUSINESS 3 SPEARFISH COUNTY ROAD RESOLUTION 2023 25.PDF
TINTON ROAD 4A FRTA SF 299 (1).PDF
TINTON ROAD 4B FRTA SUMMARY (1).DOCX
TINTON ROAD 4C FRTA PROCESS (2).PDF
TINTON ROAD 4D FRTA PUBLIC ROAD EASEMENT EXAMPLE (1).DOCX
TINTON ROAD 4E FRTA SURVEYINGPLATTING (1).PDF
TINTON ROAD FRTA 4F GENERAL ROAD DESIGN SUMMARY (1).PDF

1.I. Additional Meeting Information

Documents:

NON-AGENDA CORRESPONDENCE 3 MEETING NOTICE BH MULTIPLE USE
COALITION.PDF

1.II. Additional Meeting Information

Documents:

GB 6 SDSU EXTENSION AGREEMENT.PDF

1.III. Additional Meeting Information

Documents:

BALO SECTION LINE .PDF

2. Planning & Zoning Items For County Commission Meeting - November 14, 2023

Documents:

2024 PROFESSIONAL SERVICES AGREEMENT WITH TOM PAISLEY.PDF
2023-7 SR LOT 33A OF SUGARLOAF VILLAGE FORMERLY LOT 37 AND PORTION OF
CHEYENNE CROSSING VILLAGE TRACT.DOCX - GOOGLE DOCS.PDF
2023-8 SR PR1 AND PR2 OF MS1376 OF PORTO RICO AND PORTO RICO 2 OF
MS1376 .DOCX - GOOGLE DOCS.PDF
2023-9 SR LOTS G1, N1, 4-1, 5-1, 6B-1 NEMO PLACER MS 1368 P2.DOCX - GOOGLE
DOCS.PDF
2023-10 SR LOTS 1A AND 1B BLOCK 11 OF TRAILSIDE ADDITION.DOCX - GOOGLE
DOCS.PDF

2023-11 SR LOTS 1A AND 1B DANCING SKY ADDITION.DOCX - GOOGLE DOCS.PDF
2023-13 SR LOTS 9A AND 12A SMOKEY MTN RANCH.DOCX - GOOGLE DOCS.PDF
2023-14 SR TRACT W1 AND TRACT W2 OF TRACT W - GOOGLE DOCS.PDF
STAFF REPORT CUP 441-23 COMM REC FACILITY-WILLSON-THOMAS.DOCX -
GOOGLE DOCS.PDF
VAR 208 STAFF REPORT FOR SCHMIDT - GOOGLE DOCS.PDF
TUP 23-05 CHURCH_MAD MT ADVENTURES_PETERSEN.PDF

11/14/2023 – 8:00 County Offices

[illegible]

LAWRENCE COUNTY COMMISSIONERS MEETING – November 14, 2023

Chairman Robert Ewing called the regular meeting of the Lawrence County Commissioners to order and the Pledge of Allegiance was conducted at 8:00 a.m. on November 14, 2023 in the Administrative Annex Building of the Lawrence County Courthouse located at 90 Sherman Street, Deadwood, SD with Commissioners Brandon Flanagan, Richard Tysdal, Richard Sleep and Eric Jennings.

All motions were passed by unanimous vote, by all members present, unless stated otherwise.

AGENDA: Bruce Outka, Deputy State's Attorney, noted amendments to the agenda to include a letter from Cameron Larson dated November 14, 2023, stating "I would like to formally withdraw CUP #487".

Moved-Seconded (Sleep-Flanagan) to accept the withdrawal of Conditional Use Permit #487 at the request of the OWNER/ APPLICANT: Larson Family, LLP. to include: the Haul Road and Operating Agreement and Exhibit 2-Dust Control Plan, Exhibit 3-Hazard Training For Surface Mining Locations, and the final version of Findings and Facts and Conclusions of Law
LEGAL DESCRIPTION: S½ SE¼ of Section 35, T7B, R1E and NE¼ of Section 2, T6N, R1E
VICINITY LOCATION: Spearfish/Homestake Road SUMMARY: Small Scale Gravel Pit
ZONING: A-1 ACREAGE: 101.63 acres. Motion Carried.

Outka noted that the applicant could reapply but would have to start the entire process over to include the application fee and public hearing process as required in the Zoning Ordinance.

Moved-Seconded (Flanagan-Jennings) to approve the agenda as amended. Motion Carried.

DECLARE CONFLICTS: No Conflicts were declared by the Lawrence County Commission.

MINUTES: Moved-Seconded (Flanagan-Jennings) to approve the minutes of October 24, 2023 County Commission meeting. Motion Carried.

PERSONNEL:

AUDITOR: Moved-Seconded (Flanagan-Jennings) to approve the step raise for Krista L. Schroeder as a full-time permanent CE 1 G3 at a base rate of \$20.49 per hour, effective November 19, 2023. Motion Carried.

INFORMATION SYSTEMS & TECHNOLOGY: Moved-Seconded (Jennings-Tysdal) to approve the new hire for Kyle Anderson as a full-time permanent Information Systems & Technology Specialist G1 at a base rate of \$26.97 per hour, effective November 27, 2023. Motion Carried.

SHERIFF: Moved-Seconded (Flanagan-Tysdal) to approve the cell phone per Diem of \$104.00 per month for Brent McNeil, effective September 24, 2023. Motion Carried.

Moved-Seconded (Flanagan-Tysdal) to approve the cell phone per Diem of \$104.00 per month for Colin Simpson, effective October 24, 2023. Motion Carried.

Moved-Seconded (Jennings-Ewing) to approve the new hire for Robert R. Witherspoon II as a full-time permanent Dispatcher I G1 at a base rate of \$21.23 per hour, effective November 14, 2023. Motion Carried.

Moved-Seconded (Jennings-Tysdal) to approve the new hire for Julianne F. Blakeman as a part-time fill-in Dispatcher II G1 at a base rate of \$22.53 per hour, effective November 14, 2023. Motion Carried.

Moved-Seconded (Flanagan-Jennings) to approve the new hire for Stephanie Brooks as a full-time permanent Correctional Case Manager G2 at a base rate of \$33.75 per hour, effective December 11, 2023. Motion Carried.

VOLUNTEER/POINT OF DISBURSING MANAGER: Moved-Seconded (Jennings-Ewing) to approve Ron Moeller as a Volunteer for insurance purposes. Aye-Flanagan, Tysdal, Jennings & Ewing. Nay-Sleep. Motion Carried.

AUDITOR'S ACCOUNT WITH TREASURER REPORT: Moved-Seconded (Sleep-Jennings) to accept the Auditor's Account with the County Treasurer. Motion Carried. As of October 31, 2023, showed the following: Total amount of actual cash-\$1,350.00; total amount of checks and drafts in Treasurer's possession not exceeding three days (check deposit in transit)-\$1,129,587.75; total amount of cash in transit in Treasurer's possession (cash deposit in transit)-\$20,423.98; petty cash-\$2,725.00; total amount of deposits in bank include: CD's \$5,000,000.00; bank balance \$35,636,863.70; US Bank balance \$21,315,960.79; money market \$1,636,917.37. Total \$64,743,828.59. Motion Carried.

EXECUTIVE ORDER 2023-13/CERTIFICATION FOR DOT AGREEMENTS: Moved-Seconded (Flanagan-Jennings) to authorize the Chairman to sign the Acknowledgment and Certificate required by Executive Order 2023-13. Motion Carried.

ABATEMENT: Moved-Seconded (Flanagan-Jennings) to approve the abatement for Paha Sapa Holdings, LLC. on parcel #31090-02600-070-00 for 2022 taxes payable in 2023 as the structure was destroyed by fire in 2021. Motion Carried.

COUNTY BOARDS AND COMMITTEES:

LAWRENCE COUNTY REVOLVING LOAN FUND: Moved-Seconded (Flanagan-Sleep) to appoint Commissioner Tysdal to the Lawrence County Revolving Loan Fund Board for 2023. Motion Carried.

MULTIPLE USE COMMITTEE: Moved-Seconded (Flanagan-Sleep) to appoint Commissioner Tysdal as an alternate to the Multiple Use Committee for 2023. Motion Carried.

PLANNING & ZONING: Moved-Seconded (Flanagan-Sleep) to have Commissioner Tysdal retain his position on the Planning & Zoning Board. Motion Carried.

NATURAL RESOURCES COMMITTEE: Moved-Seconded (Flanagan-Ewing) to appoint Commissioner Jennings and Randy Deibert to the Natural Resources Committee for 2023. Motion Carried.

PLANNING & ZONING SUBDIVISION ORDINANCE REVIEW COMMITTEE: Moved-Seconded (Flanagan-Jennings) to appoint Commissioner Tysdal to the Planning & Zoning Subdivision Ordinance Review Committee. Motion Carried.

LAWRENCE COUNTY MASTER TRANSPORTATION PLAN: Moved-Seconded (Flanagan-Jennings) to appoint Commissioner Sleep and Tysdal to the Lawrence County Master Transportation Plan study group. Motion Carried.

COUNTY CHRISTMAS PARTY: Moved-Seconded (Sleep-Flanagan) to allow the closure of the Lawrence County Offices from 12:00 p.m. – 1:30 p.m. on December 12, 2023 for the County Christmas Party. Motion Carried.

SPECIAL ELECTION/CANVASS & COST: Moved-Seconded (Sleep-Ewing) to schedule the canvassing of the election results for the special election referendum Re: C.U.P. #484 on December 21, 2023 at 8:00 a.m. Motion Carried.

Brenda McGruder, Auditor, reported that the election budget does not have the budget authority for the expenditures to hold the upcoming December 19, 2023 special election. McGruder added that a supplemental budget hearing could be scheduled or a contingency transfer could be done to cover the cost. McGruder added that it cost approximately \$30,000.00 to hold an election.

CONTINGENCY TRANSFER: Moved-Seconded (Flanagan-Tysdal) to approve the contingency transfer of \$30,000.00 to the Elections budget to cover the cost of the December 19, 2023 Special Election. Motion Carried.

2024 GROUP HEALTH INSURANCE BUDGETS: Brenda McGruder, Auditor, informed the board that there may be some individuals signing up for the single policy that were not budgeted for in 2024 as the County pays 100% of the policy cost. McGruder stated that she wanted the board to be aware in the event a department needed a supplement to cover the cost.

COURTHOUSE & JAIL FUND: Brenda McGruder, Auditor, reported that the Courthouse roof project is now complete and would like to close out the Courthouse and Jail fund. McGruder stated that the county has not levied for this fund since 2011 taxes payable in 2012. McGruder explained options for the placement of the funds.

Moved-Seconded (Jennings-Flanagan) to set a supplemental budget hearing for December 12, 2023 and to close out the Courthouse & Jail fund using the remaining funds to pay, in part, the Public Safety and Services Center RCS Construction, Inc. invoice. Motion Carried.

SHERIFF:

SHERIFF'S REPORT: No Report.

PUBLIC SAFETY & SERVICES CENTER: No Report.

2024 LIQUOR LICENSE RENEWALS: A public hearing was held on an application for renewal of liquor licenses for 2024. No public input was voiced and the hearing was closed. Moved-Seconded (Flanagan-Jennings) to renew the following liquor licenses for 2024. Motion Carried. PACKAGE LIQUOR - OFF SALE LICENSE THE MERC PIZZA AND PUB: M.S. 1368 Tract 3, Section 27, T3N, R5E, B.H.M. MATTINGLEYS LLC (St. Onge Bar): LOTS 1 & 2 BLOCK 8, Section 23, T7N, R3E BLACK HILLS, LLC (Steel Wheel): TRACT D REVISED HES 297 plat: 2004-6035 Sec 19, T4N, R4E, B.H.M. RETAIL AND SUNDAY ON-SALE LICENSE LEAD COUNTRY CLUB, INC.: Block 5 Ironwood Estates Section 31, T4, R3 VEZARO INC (Guadalajara Mexican Restaurant): Lot 3 & Pt Lots 2 & 4 & Pt of Lot B of Lot A of Lot 1 (NW4NW4) 3-6-2 SPEARFISH CANYON RESORTS LLC, (Spearfish Canyon Lodge): P.C. 953 LOT C AND D OF LITTLE SPF. SECTION 36, T5N, R1E, B.H.M. SPEARFISH CANYON RESORTS LLC, (Latchstring Restaurant): M.S. 991 PT. LOT Ab-1 A SUBDIVISION OF LATCHSTRING VILLAGE LOT Ab OF CASCADE PLACER IN THE W ½ OF SECTION 31, T5N, R2E, AND THE E ½ OF SECTION 36, T5N R1E, B.H.M., Lawrence Co, SD. BLACK HILLS CHAIRLIFT CO.INC., (Dark Horse Saloon): Gov't Lots 6 Ex Lot A (.329A) & Ex Tract 2 (.40A) & Gov't Lot 11 ex remainder of Tract 1 (7.229A) & Ex Terry Peak Estates Lots 1A-7B (4.44A) & ROW (1.036A) 02-004-02 TOMAHAWK LAKE COUNTRY CLUB: Tomahawk Tract, Formerly a Part of HES 66 and HES 57 of Section 19; Parts of Norwood No. 5 and Norwood No. 6 of MS 1372; Tract 0067A, Tract 0067 C, and Part of Tract 0067B; Tract A of HES 57 and HES 66, and Lot 1 of Norwood No. 4 of MS 1372; All located in the NE1/4, SE1/4 and SW1/4 of Section 19 and the NW1/4 of Section 30, T4N, R4E, BHM BOULDER CANYON MANAGEMENT LLC, (Boulder Canyon Country Club): Golf Course Tract 1 Section14, T5N, R4E of the BHM; and Apple Springs S/D Back Nine Tract 1, 2, 3A and 4; Golf Course Tract 2 13-005-04; Apple Springs S/D-Apple Springs Tract ex platted Lots & ROW 14-005-04 RETAIL ON-OFF SALE WINE SEVEN DOWN LLC (Seven Down Arena): TRACT 7plat: 2006-201 Section 27, T6N, R3E THE CROSSINGS AT SPEARFISH CANYON LLC (Cheyenne Crossing): M.S. 1564 SPEARFISH CANYON LOT C-3 OF MEADOW #1, #2, #3 Lodes M.S. 22-004-02 plat: 1991-1411 WICKHAM PROPERTIES LLC (Mystic Hills Hideaway): M.S. 1748 TRACT 1 OF ST JOHN LODES ETAL plat: 2013-2432 1-3-3 BLACK HILLS, LLC (Steel Wheel): TRACT D REVISED HES 297 plat: 2004-6035 Sec 19, T4N, R4E, BHM BAREFOOT RESORT ASSOCIATION INC. (Barefoot Resort): M.S. 2021 LOT 1R OF BAREFOOT EX UNITS D-1-O,D-1-1,D-2-0,D-2-1,D-2-2 & D-2-3. plat: 2004-6945 MINERAL 1995 THRU 2079, Sec. 2-T4N-R2E of Black Hills. CROW PEAK BREWING COMPANY LLC: Crow Peak Brewing Company Tract 4-6-2. BW GAS & CONVENIENCE RETAIL LLC (Yesway 1192): Lot 1 & W 20' Lot 2 of Lot A of Lot 1, NW1/4NW1/4 Subdivision of Section 3, T6N, R2E, B.H.M. EAGLE TREE RESORTS CO LLC (Rim Rock Lodge): BLDGS ON LEASED SITE; SPEARFISH CANYON LOT C-2. DOUBLE DIAMOND LLC(Recreational Springs Resort): M.S. 1200 Lot 3-A2 Of Tract 3-A A S/D Of Jay#1,2&3 & Fay#3, Albert Steele Fraction, Hazard, Log Cabin & Violet #3 Of Sec 24, T4N, R2E, BHM. ELKHORN RIDGE @ FRAWLEY RANCHES LLC: BLDGS ON LEASED SITE; FRAWLEY RANCHES ADDITION S ½ SECTION 26, E ½ NE ¼ SECTION 26, W ½ NW ¼ SECTION 26, E ½ NE SECTION 27, E ½ SE SECTION 27, SW SW SECTION 23, S ½ SE SECTION 22 T6 R3. RAR HOSPITALITY LLC (Branding Iron Restaurant): M.S. 1368 LOT 2 NEMO GUEST RANCH S/D plat: 2000-582 28-3-5 THE BARN AT ASPEN ACRES, LLC: TOWNSHIP 7 NORTH, RANGE 2 EAST OF BLACK HILLS MERIDIAN, SECTION 23 NW ¼ NW ¼ MULEY HILL LODGE LLC: Tract 37 and Lot A, a subdivision of Tract 37, as shown in the Plat recorded in Plat Book 5, Page 104, located in Section 24 T5N R3E BHM JUTRDA LLC (FISH N' FRY CAMPGROUND AND CAFE): Lot 1 of HES 297 & Lot 2 Ex Lot A of HES 297, in Section 18 and 19, T4N R4E BHM. BOAR'S NEST ROADHOUSE LLC: Tract 59 Section 7, T4N, R3E, BHM THE MERC PIZZA AND PUB: M.S. 1368 Tract 3, Section 27, T3N, R5E, B.H.M.

HIGHWAY:

FUEL QUOTES: The following fuel quote was submitted as of November 6 & 13, 2023:

Deadwood Diesel Blended 50/50 dyed 4000 gallons: (prices per gallon) CBH Cooperative – \$3.339; Olson Fuels – \$3.309**, MG Oil – \$3.65. **Deadwood Unleaded 5300 gallons:** (prices

per gallon) CBH Cooperative – \$2.709**; Olson Fuels – \$2.724; MG Oil – No Bid. **Spearfish Unleaded 800 gallons:** (prices per gallon) CBH Cooperative – \$2.709**; Olson Fuels – \$2.724; MG Oil – No Bid. **Whitewood Diesel Blended 50/50 dyed 900 gallons:** (prices per gallon) CBH Cooperative – \$3.339; Olson Fuels – \$3.309**; MG Oil – \$3.65. **Represents accepted quote.

COUNTY ROAD RESOLUTION #2023-25: A public hearing was held on an Resolution #2023-25 A Resolution to Accept or Transfer Dedication and Responsibility for Maintenance of Certain Roads. No public input was voiced and the hearing was closed. Moved-Seconded (Jennings-Sleep) to approve the following Resolution #2023-25 A Resolution to Accept or Transfer Dedication and Responsibility for Maintenance of Certain Roads. Motion Carried. RESOLUTION NO. 2023-25 A RESOLUTION TO ACCEPT OR TRANSFER DEDICATION AND RESPONSIBILITY FOR MAINTENANCE OF CERTAIN ROADS: WHEREAS, Lawrence County, South Dakota (County) desires to dedicate certain highway rights-of-way to the City of Spearfish, South Dakota (City), and the City has agreed to accept said dedication for future use, maintenance, repair, and jurisdiction; and, WHEREAS, the highway rights-of-way subject to the dedication are described below and further illustrated in Appendices A through E: Hillsview Road approximately 0.677 miles (Exhibit A) Starting at the intersection of Hillsview Road and College Lane then west approximately 0.677 miles to the east right of way line of McGuigan Road in Section 9, T.6N., R.2E., B.H.M. Hill Street approximately 0.286 miles (Exhibit B) Starting at the northeast corner of Section 16, T.6N., R.2E., B.H.M., then heading east approximately 0.055 miles to the intersection of St. Joe Street. Starting at the northeast corner of Section 16, T.6N., R.2E., B.H.M., then heading west approximately 0.231 miles to the east right of way line of Jonas Boulevard. Saint Onge Road approximately 1.172 (Exhibit C) Starting at the intersection of US 85 and Saint Onge Road, approximately 1,998 feet east of the northeast corner of Section 22, T6N, R3E, then east and north approximately 1.172 miles to Spearfish city limits located at the northeast corner of Section 15, T6N, R3E. WHEREAS, City desires to dedicate certain highway rights-of-way to County and the County has agreed to accept said dedication for future use, maintenance, repair, and jurisdiction; and, WHEREAS, the highway rights-of-way subject to the dedication are described below and further illustrated in Appendices D through E: Industrial Drive approximately 0.727 miles (Exhibit D) Starting at the intersection of Industrial Drive and North 27th Street located approximately 1,207 feet south and 491 feet east of the W1/4 corner of Section 7, T.6N., R.3 E., B.H.M. then southeast approximately 0.727 miles to the transitions from gravel surface to asphalt surface located 303 feet south and 951 feet east of the interior ¼ corner of Section 7, T6N, R3E. 27th Street approximately 0.83 miles – Gravel from Industrial to Windmill (Exhibit E) Starting at the intersection of Industrial Drive and North 27th Street located approximately 1,207 feet south 491 feet east of the west ¼ of Section 7, T.6N., R.3E. B.H.M. then southwest approximately 0.83 miles to the intersection of Windmill Drive located 843 feet north and 1,331 feet west of the east ¼ corner of Section 13, T6N, R2 E. NOW, THEREFORE, BE IT RESOLVED by the Lawrence County Commission, Lawrence County, South Dakota, that Lawrence County does hereby accept the dedication and transfer of roads as described and set forth herein. Dated this 14th day of November, 2023. LAWRENCE COUNTY Robert Ewing, Chairman ATTEST: Brenda McGruder, Auditor.

MEMORANDUM OF UNDERSTANDING/PENNINGTON COUNTY: Moved-Seconded (Flanagan-Tysdal) to follow the recommendation of John Bey, Highway Superintendent, and approve and authorize the Chairman to sign the Memorandum of Understanding between Lawrence County and Pennington County for the exchange of snow routes on North Rochford Road, Rochford Road and Nemo Road for the period of November 7, 2023 to May 15, 2024. Motion Carried.

TINTON ROAD FOREST ROADS AND TRAIL ACT PERMIT: John Bey, Highway Superintendent, presented the Tinton Road Forest Roads and Trails Act Permit. Valerie Jagim, USFS Realty Specialist, was present to answer any questions.

Commissioner Jennings questioned that if approved would the County be fully committed to taking on this portion of Tinton Road? Bey stated that yes, this is his understanding.

Commissioner Sleep voiced his concern that the Forest Service has too much control over the project.

Commissioner Jennings voiced his concern with item #6 of the process, stating that if the USFS gives up responsibility they must also give up control and that he doesn't feel the Forest Service is giving up control since the County has to provide 2 sets of drawings. Jennings also voiced his

concern with the NEPA work that needs to be done. Jagim stated that there is allowance for minor reconstruction but if major realignment is requested it may have to be reanalyzed.

Commissioner Sleep voiced his concern with drivers' speed on the road.

Commissioner Sleep and Jennings stated they are in opposition to the County taking over this portion of the road.

Moved-Seconded (Flanagan-Ewing) to approve and authorize John Bey, Highway Superintendent, to sign the Tinton Road Forest Roads and Trail Act Permit application and to go forward with the survey process. Aye-Flanagan, Tysdal and Ewing. Nay-Sleep and Jennings. Motion Carried.

SECTION LINE/BALO: Eric Neis, Attorney for Mona Balo, Mona Balo, 19627 Whitewood Valley Road, and Guy Balo, 19627 Whitewood Valley Road, were present to discuss an electric wire/gate strung along a section line to contain cattle.

Roger Tellinghuisen, Attorney for Anderson/Kesteloot, stated that permission from the County was given to Michael Anderson and Bruce Kesteloot on April of 2021 to make some improvements to the section line. Tellinghuisen stated that once a section line has been improved one is not allowed to place a fence across it pursuant to SDCL Ch. 31-25.

Mike Anderson, 12564 194th St, was present to express his concern with a wire strung across the road as it is a potential hazard to people using the road.

Neis stated he was present to provide guidance, and it is the Balo's intent to file a petition for a gate across the section line pursuant to SDCL 32-25-1.

PROJECT UPDATES: John Bey, Highway Superintendent, gave an update on the St. Onge Bridge #41-163-053, St. Onge Bridge #41-165-066, Whitewood Service Road Bridge #41-214-100 and SDACHS/38th Annual Local Road Conference.

John Bey, Highway Superintendent, asked for permission to purchase a 2023 Diamond Mowers, Inc. 72Mulcher since the mower he was going to purchase in 2023 will not be available until 2024.

Moved-Seconded (Flanagan-Tysdal) to authorize the purchase of a 2023 Diamond Mowers, Inc. 72Mulcher and Safety Glass in the amount of \$40,220.00. Motion Carried.

PLANNING & ZONING:

PROFESSIONAL SERVICES AGREEMENT/LOOKOUT PLAN + CODE CONSULTING, LLC.: Moved-Seconded (Jennings-Tysdal) to approve and authorize the Chairman to sign the agreement between Lawrence County and Lookout Plan + Code Consulting LLC. Motion Carried.

PLATS:

2023 - 7 PRELIMINARY & FINAL PLAT/ABERLE DEVELOPMENT COMPANY:

APPLICANT: Aberle Development Company LEGAL DESCRIPTION: Lot 33A of Sugarloaf Village, Formerly Lot 37 and a Portion of the Cheyenne Crossing Village Tract; A Sub of the Cheyenne Crossing Village Tract 3, Consisting of Lot 3B of the Sub of Tract 2 of the Jay No. 1-3, Fay No. 3, Albert Steele Fraction, Hazard, Log Cabin, and a Portion of Violet No 2 & 3 Lodes of MS 1200, and a Portion of Violet No 1, Portion of Springview MS 1200, All Located in S19, T4N, R3E and S24,T4N, R2E (legal shortened) VICINITY LOCATION: Hwy 14A SUMMARY: Combine original lots 32 & 33 - Fire Plan Completed ZONING: SRD.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Moved-Seconded (Tysdal-Flanagan) to approve the preliminary & final plat for APPLICANT: Aberle Development Company based upon the Planning and Zoning Commission recommendation for approval and the concurrent recommendation of P&Z staff, as reflected in the staff report. LEGAL DESCRIPTION: Lot 33A of Sugarloaf Village, Formerly Lot 37 and a Portion of the Cheyenne Crossing Village Tract; A Sub of the Cheyenne Crossing Village Tract 3, Consisting of Lot 3B of the Sub of Tract 2 of the Jay No. 1-3, Fay No. 3, Albert Steele Fraction, Hazard, Log Cabin, and a Portion of Violet No 2 & 3 Lodes of MS 1200, and a Portion of Violet No 1, Portion of Springview MS 1200, All Located in S19, T4N, R3E and S24,T4N, R2E (legal

shortened) VICINITY LOCATION: Hwy 14A SUMMARY: Combine original lots 32 & 33 - Fire Plan Completed ZONING: SRD. Motion Carried.

2023-8 PRELIMINARY & FINAL PLAT/HOMESTAKE MINING CO. OF CA, A CALIFORNIA CORP AND SHIRLEY C. MORTON REVOCABLE LIVING TRUST: APPLICANT: Homestake Mining Co. of CA, a California Corp and Shirley C. Morton Revocable Living Trust LEGAL DESCRIPTION: Tract PR1 and PR2 of MS 1376, Being all of the Porto Rico and Porto Rico No. 2 of MS 1376 Located in Sections 10, 11, 14, & 15 of T5N, R2E, BHM, Lawrence County, South Dakota VICINITY LOCATION: Roman Road SUMMARY: Adjust property lines to match fence line - Fire Plan Exempt ZONING: PF.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Moved-Seconded (Flanagan-Jennings) declaring that the plat for APPLICANT: Homestake Mining Co. of CA, a California Corp and Shirley C. Morton Revocable Living Trust meets exemption criteria per the subdivision ordinance, Chapter 4, Article 3. Motion Carried.

Moved-Seconded (Tysdal-Sleep) to approve the preliminary & final plat for APPLICANT Homestake Mining Co. of CA, a California Corp and Shirley C. Morton Revocable Living Trust based upon the Planning and Zoning Commission recommendation for approval and the concurrent recommendation of P&Z staff, as reflected in the staff report LEGAL DESCRIPTION: Tract PR1 and PR2 of MS 1376, Being all of the Porto Rico and Porto Rico No. 2 of MS 1376 Located in Sections 10, 11, 14, & 15 of T5N, R2E, BHM, Lawrence County, South Dakota VICINITY LOCATION: Roman Road SUMMARY: Adjust property lines to match fence line - Fire Plan Exempt ZONING: PF. Motion Carried.

2023 - 9 PRELIMINARY & FINAL PLAT/NEMO MOUNTAIN COTTAGES, KELLER & RAMBO: APPLICANTS: Nemo Mountain Cottages, Bruce Keller & Traci Rambo LEGAL DESCRIPTION: Lots G1, N1, 4-1, 5-1, 6B-1 and 40' Private Access and Utility Easement of the Subdivision of the Nemo Placer, M.S. 1368 (legal shortened) VICINITY LOCATION: Nemo Road SUMMARY: Lot line adjustments-Fire Plan exempt ZONING: PF & SRD.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Moved-Seconded (Sleep-Jennings) declaring that the plat for APPLICANT: Nemo Mountain Cottages, Bruce Keller & Traci Rambo meets exemption criteria per the subdivision ordinance, Chapter 4, Article 3. Motion Carried.

Moved-Seconded (Tysdal-Sleep) to approve the preliminary & final plat for APPLICANT Nemo Mountain Cottages, Bruce Keller & Traci Rambo based upon the Planning and Zoning Commission recommendation for approval and the concurrent recommendation of P&Z staff, as reflected in the staff report. LEGAL DESCRIPTION: Lots G1, N1, 4-1, 5-1, 6B-1 and 40' Private Access and Utility Easement of the Subdivision of the Nemo Placer, M.S. 1368 (legal shortened) VICINITY LOCATION: Nemo Road SUMMARY: Lot line adjustments-Fire Plan exempt ZONING: PF & SRD. Motion Carried.

2023-10 PRELIMINARY & FINAL PLAT/PRAIRIE HILLS ENTERPRISES, LLC.: APPLICANT: Prairie Hills Enterprises, LLC. LEGAL DESCRIPTION: Lots 1A and 1B, Block 11 of Trailside Addition, Formerly Lot 1, Block 11 of Trailside Addition being a Subdivision of a Portion of Tract 2 and Portions of Diorite MS 1151 and Cyclone Fraction MS 1153, All situated in S18, T4N, R3E (legal shortened) VICINITY LOCATION: Powderhouse Pass SUMMARY: Subdivision for residential townhouses - Fire Plan in place ZONING: PUD.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Moved-Seconded (Flanagan-Tysdal) to approve the preliminary & final plat for APPLICANT: Prairie Hills Enterprises, LLC. based upon the Planning and Zoning Commission recommendation for approval and the concurrent recommendation of P&Z staff, as reflected in the staff report. LEGAL DESCRIPTION: Lots 1A and 1B, Block 11 of Trailside Addition, Formerly Lot 1, Block 11 of Trailside Addition being a Subdivision of a Portion of Tract 2 and Portions of Diorite MS 1151 and Cyclone Fraction MS 1153, All situated in S18, T4N, R3E (legal shortened) VICINITY LOCATION: Powderhouse Pass SUMMARY: Subdivision for residential townhouses - Fire Plan in place ZONING: PUD. Aye-Flanagan, Tysdal, Jennings and Ewing. Nay-Sleep. Motion Carried.

2023-11 PRELIMINARY & FINAL PLAT/POWDER HOUSE PASS: APPLICANT: Powder House Pass - Dancing Sky Addition LEGAL DESCRIPTION: Lots 1A and 1B of Dancing Sky Addition, Formerly Lot 1 of Dancing Sky Addition, Being a portion of Tract 2B of Wilderness Estates 2nd Addition and a Portion of Tract 2 of PHP, Located in some Left Fraction MS 1101, Edison No 2 and Edison No 2 & 3 MS 1169, in E12 of S7, T4N, R3E (legal shortened) VICINITY LOCATION: Powderhouse Pass SUMMARY: Subdivision for Townhouse - Fire Plan in place ZONING: PUD.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Moved-Seconded (Tysdal-Flanagan) to approve the preliminary & final plat for APPLICANT: Powder House Pass based upon the Planning and Zoning Commission recommendation for approval and the concurrent recommendation of P&Z staff, as reflected in the staff report. LEGAL DESCRIPTION: Lots 1A and 1B of Dancing Sky Addition, Formerly Lot 1 of Dancing Sky Addition, Being a portion of Tract 2B of Wilderness Estates 2nd Addition and a Portion of Tract 2 of PHP, Located in some Left Fraction MS 1101, Edison No 2 and Edison No 2 & 3 MS 1169, in E12 of S7, T4N, R3E (legal shortened) VICINITY LOCATION: Powderhouse Pass SUMMARY: Subdivision for Townhouse - Fire Plan in place ZONING: PUD. Motion Carried.

2023-13 PRELIMINARY & FINAL PLAT/WILSON & HAXTON: APPLICANTS: Scott & Kathryn Wilson & Clinton & Rita Haxton Living Trust LEGAL DESCRIPTION: Lots 9A and 12A part of Smokey Mountain Ranch Subdivision, formally Lots 9, 10, and 12 of Smokey Mountain Ranch Subdivision, Part of Riley Wolff Tracts 1&3, Located in the SE1/4SE1/4 of S28 and NE1/4NE1/4 of S33, All in T6N, R4E (legal shortened) VICINITY LOCATION: Whitewood SUMMARY: Lot line adjustment - Fire Plan Completed ZONING: SRD.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Moved-Seconded (Sleep-Jennings) to approve the preliminary & final plat for APPLICANT: Scott & Kathryn Wilson & Clinton & Rita Haxton Living Trust based upon the Planning and Zoning Commission recommendation for approval and the concurrent recommendation of P&Z staff, as reflected in the staff report. LEGAL DESCRIPTION: Lots 9A and 12A part of Smokey Mountain Ranch Subdivision, formally Lots 9, 10, and 12 of Smokey Mountain Ranch Subdivision, Part of Riley Wolff Tracts 1&3, Located in the SE1/4SE1/4 of S28 and NE1/4NE1/4 of S33, All in T6N, R4E (legal shortened) VICINITY LOCATION: Whitewood SUMMARY: Lot line adjustment - Fire Plan Completed ZONING: SRD. Motion Carried.

2023 - 14 PRELIMINARY ~ APPLICANT: Lead-Deadwood Sanitary District LEGAL DESCRIPTION: Tract W1 and Tract W2 of Tract W, a sub of a portion of HES 41, in Section 19, 20, 29, & 30 T4N, R3E (legal shortened) VICINITY LOCATION: Englewood Road SUMMARY: Create Pump House lot - Fire Plan coming ZONING: PF.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Moved-Seconded (Flanagan-Jennings) declaring that the plat for APPLICANT: Lead-Deadwood Sanitary District meets exemption criteria per the subdivision ordinance, Chapter 4, Article 3. Motion Carried.

Moved-Seconded (Flanagan-Tysdal) to approve the preliminary plat for APPLICANT: Lead-Deadwood Sanitary District with the following conditions as follows: 1. The W2 lot needs to have a no residential building restriction added to the plat. 2. The notation in the minutes that Lot W1 will be required to have a full fire plan if there is any future subdivision of it and based upon the Planning and Zoning Commission recommendation for approval and the concurrent recommendation of P&Z staff, as reflected in the staff report. LEGAL DESCRIPTION: Tract W1 and Tract W2 of Tract W, a sub of a portion of HES 41, in Section 19, 20, 29, & 30 T4N, R3E (legal shortened) VICINITY LOCATION: Englewood Road SUMMARY: Create Pump House lot - Fire Plan coming ZONING: PF. Motion Carried.

CONDITIONAL USE PERMIT/WILSON/JORDAN: CUP #441 Wilson/Jordan ~ Transfer of Commercial Recreational Facility CUP from: Crow Peak CrossFit to Spearfish Martial Arts.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Moved-Seconded (Flanagan-Ewing) to transfer Conditional Use Permit #441 from Crow Peak CrossFit to Spearfish Martial Arts conditioned upon Spearfish Martial Arts assumption of all of the terms and conditions of the current CUP with the additional hours of operation in condition #9 changing to 5:30 a.m. to 8:30 p.m. Motion Carried.

RECESS: 9:30 a.m. Moved-Seconded (Flanagan-Sleep) to recess the County Commission meeting and convene as the Board of Adjustment. Motion Carried. At 9:46 a.m., the Chairman called the Commission meeting back to order. See Board of Adjustment minutes for detail.

TEMPORARY USE PERMIT #23-05/CHAPTER OF CALVARY CATHEDRAL/THE EPISCOPAL DIOCESE OF SOUTH DAKOTA/MAD MOUNTAIN ADVENTURES/AMY PETERSEN: A public hearing was held on Temporary Use Permit #23-05
OWNER/APPLICANT: Chapter of Calvary Cathedral/The Episcopal Diocese of South Dakota/Mad Mountain Adventures/Amy Petersen **LEGAL DESCRIPTION:** Portion of HES 243 SECTION 23, T3N, R1E, B.H.M VICINITY **LOCATION:** US Hwy 85 **SUMMARY:** Check in & check out location for snowmobile rentals **ZONING:** PF.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

Amy Peterson, 758 Stage Run Rd, was present to explain the request for the Temporary Use Permit.

Maggie Riley, 1030 N 5th Street, Mark & Betsy Carbo, 21892 Juso Ranch Rd, Steve Sanford, 4701 S Twin Ridge Rd, all spoke in favor of the Temporary Use Permit.

No other public input was voiced and the hearing was closed.

Moved-Seconded (Jennings-Sleep) to approve the Temporary Use Permit #23-05 with the following conditions: The owner and operator shall comply with all applicable County, State, and Federal regulations regarding lodging requirements. Any new construction shall require a building permit from the Lawrence County Planning and Zoning Dept. The South Dakota Department of Health shall inspect the facility and issue a license prior to opening. First aid kit(s) shall be made accessible to the guests and employees. Water quality testing shall be conducted by the operator according to the South Dakota DANR Water Quality Division regulations and found to be safe for public consumption. One on-premise sign shall be allowed on the property and conform to Chapter 8-Sign Regulations of the Lawrence County Zoning Ordinance. Any proposed sign must be presented to Lawrence County Planning and Zoning Office along with a Sign Permit Application. Litter containers and trash barrels shall have lids and be strategically placed around the area so as to prevent free blowing trash. The employees shall police trash periodically. The trash containers shall be emptied on a regular basis or by demand. All septic systems shall be designed, inspected and approved by a South Dakota registered professional engineer (PE) and installed by a State Licensed Installer. The proposed septic system shall be reviewed by the DANR, prior to issuance of a building permit. All noxious weeds shall be controlled per the Lawrence County Weed Department regulations. Exterior lights shall be placed strategically throughout the property all lighting shall be fully shielded and have 100% cut-off type fixtures. "Downthrow" lighting. Any parking pertaining to the operation shall comply with Chapter 7-Parking Regulations of the Lawrence County Zoning Ordinance. A minimum of one (1) telephone shall be available for emergency use 24/7 by any party staying onsite. A list of emergency numbers; sheriff department numbers and emergency contact for the facility shall be placed next to the phones. Shall not result in invasive, unreasonable or offensive noise and otherwise create a private or public nuisance. If any terms, condition or requirement stipulated in the Temporary Use Permit, the Lawrence County Zoning Ordinance or applicable State and Federal regulations are not fully complied with in all respects, this permit shall be reviewed and may be suspended or revoked. This permit shall be reviewed on an annual basis or on an as needed basis to assure compliance with the attached conditions, at which time additional conditions may be attached or the permit may be canceled if deemed necessary for the protection of the public interest. Hours of operations shall be 8:00 am to 4:30 pm. **OWNER/APPLICANT:** Chapter of Calvary Cathedral/The Episcopal Diocese of South Dakota/Mad Mountain Adventures/Amy Petersen **LEGAL DESCRIPTION:** Portion of HES 243 SECTION 23, T3N, R1E, B.H.M VICINITY **LOCATION:** US Hwy 85 **SUMMARY:** Check in & check out location for snowmobile rentals **ZONING:** PF. Motion Carried.

PRE-DISASTER MITIGATION PLAN AGREEMENT: Kailey Snyder, Black Hills Council of Local Governments, was present to discuss the Pre-Disaster Mitigation Plan agreement.

Moved-Seconded (Flanagan-Ewing) to approve and authorize the Chairman to sign the Pre-Disaster Mitigation Plan agreement between Lawrence County and Black Hills Council of Local Governments for the Lawrence County Natural Hazard Mitigation Plan Update. Aye-Flanagan, Tysdal, Jennings and Ewing. Nay-Sleep. Motion Carried.

Moved-Seconded (Jennings-Flanagan) to appoint Commissioner Tysdal to the Hazard Mitigation Planning team. Motion Carried.

NATURAL RESOURCES COMMITTEE:

FOREST PLAN REVISION PRINCIPAL COOPERATOR CONTACT: Moved-Seconded (Flanagan-Tysdal) to appoint Randy Deibert as a Forest Plan revision principal cooperator contact. Aye-Flanagan, Tysdal and Ewing. Nay-Sleep and Jennings. Motion Carried.

PROPOSED LANGUAGE/COOPERATING AGENCY MEMORANDUM OF

UNDERSTANDING: Mitch Iverson, Natural Resource Committee, was present and presented the proposed language for Lawrence County and Black Hills National Forest Cooperating Agency Memorandum of Understanding. Iverson will bring the Cooperating Agency Memorandum of Understanding for approval at the next meeting.

FOREST PLANNING SYMPOSIUM: The Forest Planning Symposium will be held on November 29, 2023 at the Rushmore Hotel in Rapid City, SD.

PETITION FOR VACATION OF SECTION LINE/HIGHWAY/RIGHT-OF-WAY/

WASSERMAN: A Public Hearing was held on a Petition for Vacation of Section Line Right-of-Way **LEGAL DESCRIPTION FOR THE VACATION: EXHIBIT DRAWING FOR SECTION LINE R.O.W. VACATION ACROSS LOT 2 OF SKYLINE SUBDIVISION, A SUBDIVISION OF WEEDON NO. 1, NEW YEAR & GROVER, M.S. 1409 AND MCKINLEY & IVANHOE, M.S. 1494, LOCATED IN SECTIONS 17 & 20, T5N, R3E, B.H.M., LAWRENCE COUNTY, SOUTH DAKOTA AFFECTING THE LANDOWNERS: DOUGLAS A AND DIANE C WASSERMAN.**

Brenda McGruder, Auditor, presented Lawrence County Resolution #2023-26, A Resolution & Order to Vacate a Portion of a Highway, Part of Which Is Located on a Section Line/Highway/Right of Way.

No public input was voiced and the public hearing was closed.

Moved-Seconded (Flanagan-Jennings) to approve, adopt, and authorize the Chairman to sign Lawrence County Resolution #2023-26, Resolution & Order to Vacate a Portion of a Highway, Part of Which Is Located on a Section Line/Highway/Right of Way. Motion Carried.

LAWRENCE COUNTY RESOLUTION #2023-26 RESOLUTION & ORDER TO VACATE A PORTION OF A HIGHWAY, PART OF WHICH IS LOCATED ON A SECTION LINE/HIGHWAY/RIGHT OF WAY WHEREAS, a petition was presented to the Board of County Commissioners of Lawrence County, South Dakota, signed by all adjacent landowners as there are fewer than three, requesting that a portion of a highway, part of which is located on a section line/highway/right of way be vacated, **WHEREAS,** the Board of County Commissioners set a date for hearing and evidence having been presented to the Board of County Commissioners that notice has been given of the time, place and purpose of said hearing by publication of notice in the B.H. Pioneer, Spearfish, South Dakota once each week for two consecutive weeks prior to the date of hearing, and **WHEREAS,** the Board of County Commissioners having acted as a committee of the whole concerning said vacation, and **WHEREAS,** said section line does not constitute a portion of a South Dakota State Trunk Highway System nor the Lawrence County Highway System, and **WHEREAS,** the public interest will be better served by the proposed section line vacation, now therefore, **BE IT RESOLVED** by the Lawrence County Board of Commissioners as follows: That the described portion of a highway, part of which is located on a section line/highway/right of way be vacated: **LEGAL DESCRIPTION FOR THE VACATION: EXHIBIT DRAWING FOR SECTION LINE R.O.W. VACATION ACROSS LOT 2 OF SKYLINE SUBDIVISION, A SUBDIVISION OF WEEDON NO. 1, NEW YEAR & GROVER, M.S. 1409 AND MCKINLEY & IVANHOE, M.S. 1494, LOCATED IN SECTIONS 17 & 20, T5N, R3E, B.H.M., LAWRENCE COUNTY, SOUTH DAKOTA AFFECTING THE**

LANDOWNERS: DOUGLAS A AND DIANE C WASSERMAN Dated this 14th day of November, 2023 Robert Ewing, Chairman Lawrence County Commission ATTEST: Brenda McGruder, Lawrence County Auditor I, Brenda McGruder, the duly appointed Auditor of Lawrence County, South Dakota, do hereby certify that the within and foregoing resolution was passed by the Lawrence County Board of County Commissioners at a regular session held November 14th, 2023. Dated at Deadwood, South Dakota, the 14th day of November, 2023. Brenda McGruder, Lawrence County Auditor.

INFORMATION SYSTEMS & TECHNOLOGY: Greg Dias, Information Systems & Technology, gave an update on the proposed website redesign. Dias stated he plans to send a survey out to the department head for input and form a advisory project team.

Moved-Seconded (Jennings-Flanagan) to authorize the Chairman to sign the statement of work with CivicPlus for 2024. Motion Carried.

ITEMS FROM THE PUBLIC: None.

ITEMS FROM THE COMMISSIONERS:

The Black Hills Regional Multiple Use Coalition will meet Thursday, November 16, 2023 at 4:00 p.m. at the Spearfish Holiday Inn.

Commissioner Jennings commented on the process to fill a Commission seat following a vacancy. Jennings stated a public notice should be published along with expressed interest to the position and feels a change to state statute is warranted.

BILLS (APPROVED DURING GENERAL BUSINESS AT 8:00 A.M.): Moved-Seconded (Sleep-Jennings) to approve payment of the following payroll and vouchers listed below for expenditures for insurance, professional services, publications, rentals, supplies, repairs, maintenance, travel, conference fees, utilities, furniture and equipment drawn on the proper funds and various departments. Motion Carried.

Payroll: Comm-\$15,689.82; Aud-\$27,407.52; Treas-\$31,028.16; States Atty-\$34,564.08; Pub Def-\$27,689.60; Gen Govt Bldg-\$23,595.12; Equal-\$36,460.91; Rod-\$21,964.87; Vso-\$4,098.04; Ist-\$17,856.86; Sher-\$121,680.18; Jail-\$81,074.63; Coroner-\$2,748.08; 24/7-\$405.76; Emerg Mgmt-\$10,199.46; E911-\$104,706.26; Weed-\$9,289.80; P&Z-\$17,866.36; **Bills:** Thomson, Paul-\$34.00; Vogt, Amber-\$34.00; Isburg, Damon-\$115.00; Capp, Jacob-\$394.00; Moser, Douglas-\$100.00; Palmer, Laurel-\$86.00; Baker, Barbara-\$91.02; Sims, Katherine-\$225.00; American Family Life-\$2,486.30; Deadwood Recreation Center-\$700.00; Delta Dental Of South Dakota-\$8,955.04; Dept Of The Treasury-\$73,898.34; Hartford-Priority Accounts-\$2,283.31; Northern Hills Rec Center-\$92.00; Sd Retirement System-\$76,765.48; Wellmark Blue Cross-\$126,463.56; A To Z Shredding-\$27.96; A&B Business,Inc Solutions-\$3,359.69; A&B Welding Supply-\$327.40; A&I Distributors-\$1,703.45; A&J Supply-\$37.05; At&T Mobility-\$1,923.70; Audra Hill Consulting-\$235.31; Avera Health DbA Aess-\$75.00; BH Pest Control-\$190.00; BH Pioneer-\$1,965.25; Barnaud Law Firm Prof-\$3,361.69; Black Hills Chemical-\$2,600.06; Black Hills Energy-\$11,755.49; Black Hills Pure-\$11.50; Blackstrap-\$21,922.19; Bob Barker Company-\$142.93; Bomgaars Supply-\$85.20; Butte Electric Coop-\$506.99; Cbh Cooperative-\$14,360.41; Century Business Products-\$390.40; Centurylink-\$359.89; Charm-Tex-\$290.00; Croell-\$5,363.50; Dakota Equip Rental/Chain Saw-\$756.54; Deadwood Rentals-\$750.00; Deadwood, City Of-\$1,739.64; Delahoyde, Katy-\$171.50; Dept Of Hlth Lab Services-\$150.00; Dept Of The Treasury-\$70,912.19; Dustbusters-\$7,146.36; Eagle Engraving-\$135.50; Election Sys & Software-\$8,861.43; Elevatus Architecture-\$30,000.00; Fischer, Shawn-\$120.00; Floyd's Truck Center-\$47.55; Fmg Engineering-\$240.10; Galls-\$489.00; Geigle, Jd-\$14.00; Genpro Energy Solutions-\$2,071.25; Godfrey's Brake Serv-\$617.31; Gordon Law Office-\$814.92; Grimm's Pump&Industrial Supply-\$451.27; Heiman Fire Equipment-\$1,467.78; High Plains Business Forms-\$1,813.60; Id Zone South-\$479.90; Intoximeters-\$495.00; Janke, Wendy-\$756.00; Jeffery J Fransen-\$6,157.80; Jefferson Partners-\$154.22; Jerry Greer's Engineering-\$134.98; Juneks' Chrysler/Dodge-\$2,320.06; Kimbell's Auto Repair-\$502.60; Kinkade Funeral Chapel-\$1,170.00; Kinney Law-\$937.40; Kosel, Joseph-\$9,127.90; Lead-Deadwood Sanitary-\$543.33; Lexisnexis Risk Data Mgmt-\$75.00; Lincoln County-\$615.30; Mabey, Brooke-\$60.00; Mastercard-\$10,526.78; Megas Propane-\$188.00; Metrasens-\$35,000.00; Montana Dakota Utilities-\$2,355.30; Monument Health Network-\$4,411.65; Monument Health Rc Hospital-\$461.00; Ms Mail-\$75.00; Nelson, Jacquelyn-\$100.00; Odp Business Solutions-\$100.10; Office Of Child Support-\$1,231.32; Pennington County Public-\$64.00; Percy, Melissa-\$520.00; Pete Lien & Sons-\$9,186.01; Pharmchem-\$127.80; Precision Kiosk Technologies-\$1,350.00; Queen City Rocket Lube-\$99.61;

Queen City Tire-\$26.25; Quill-\$2,939.21; Radiology Associates-\$224.91; Ramkota Inn Pierre-\$214.00; Res Construction-\$2,258,889.26; Riverside Technologies-\$4,830.00; Ryan, Suzanne-\$180.00; Sanford Health Occupational-\$175.00; Schlimgen Law Firm-\$781.10; Sd Continuing Legal Education-\$875.00; Sd Dept Of Transportation-\$750,760.99; Sd State Treasurer-\$1,109.87; Sdn Communications-\$260.00; Sdrs Supplemental Retirement-\$8,285.00; Seifert, Mary-\$100.00; Servall Towel & Linen-\$346.09; Sikich Llp-\$499.00; Simon North Region-\$3,754.69; Spearfish Auto Supply-\$939.94; State Bar Of South Dakota-\$3,780.00; Sturdevant's Auto Parts-\$1,108.82; Sturgis Responder Supply-\$1,618.94; Superior Printing-\$652.59; Sysco Montana-\$4,832.21; Teen Court-\$8,750.00; Transource Truck & Equip-\$579.06; Turnkey Corrections-\$21.02; Twin City Hardware & Lumber-\$2,391.53; Washington State Support Regis-\$230.76; Waste Connections-\$1,430.02; Watertree-\$54.00; Western Sd Juvenile Serv-\$10,545.00; Wex Bank-\$1,318.98; White's Canyon Motors-\$954.16; **Witness & Jurors:** \$5,110.51.

ADJOURN: 10:54 a.m. There being no further business, Chairman Ewing adjourned the meeting.

Date Approved

Robert Ewing, Chairperson

ATTEST:

Brenda McGruder, Auditor

LAWRENCE COUNTY BOARD OF ADJUSTMENT – November 14, 2023

Chairman Robert Ewing called the meeting of the Lawrence County Board of Adjustment to order at 9:30 a.m. on November 14, 2023, in the Administrative Annex Building of the Lawrence County Courthouse located at 90 Sherman Street, Deadwood, SD with Commissioner Brandon Flanagan, Richard Tysdal, Richard Sleep and Eric Jennings.

DECLARE CONFLICTS: No conflicts were declared by the Lawrence County Commission.

VARIANCE #208/SCHMIDT: A Public Hearing was held on VAR #208
OWNERS/APPLICANTS: Wolfgang & Kathleen Schmidt LEGAL DESCRIPTION: Tract E of Big Elk Forest, HES 88 all located in Section 4 & 9, T3N, R5E VICINITY LOCATION: Dalton Lake Road SUMMARY: Variance request for a 21’ variance to the 25/ side setback ZONING: PF.

Amber Vogt, Planning & Zoning Administrator, presented her staff report.

No public input was voiced and the hearing was closed.

Commissioner Tysdal stated that the Planning & Zoning did recommend approval of the variance.

Commissioner Flanagan stated he does not see any hardship.

Kathleen Schmidt, 12645 Dalton Lake Rd, stated that there was a culvert put in at the west end of the property when Vanocker Canyon Road was built causing drainage issues.

Moved-Seconded (Tysdal-Ewing) to approve Variance #208 as: 1). Pursuant to SDCL 11-2-53(2) as granting the variance would not be injurious to the neighborhood or detrimental to the public interest/welfare; and 2). That a special condition exists, namely, water drainage diverted from the highway onto the subject property limits building sites which also qualifies as an extraordinary and exceptional situation such that a variance is necessary. Further, that denial of the variance will create peculiar and exceptional practical difficulties OWNERS/APPLICANTS: Wolfgang & Kathleen Schmidt LEGAL DESCRIPTION: Tract E of Big Elk Forest, HES 88 all located in Section 4 & 9, T3N, R5E VICINITY LOCATION: Dalton Lake Road SUMMARY: Variance request for a 21’ variance to the 25/ side setback ZONING: PF. Aye-Sleep, Tysdal and Ewing. Nay-Flanagan and Jennings. Motion Failed.

Kathleen Schmidt, 12645 Dalton Lake Rd, stated that her son has moved into the cabin and is in need of a shop for his work.

Commissioner Flanagan and Jennings will do an onsite.

ADJOURN: 9:46 a.m. There being no further business it was Moved-Seconded (Flanagan-Jennings) to adjourn the meeting. Motion Carried.

Date Approved

Robert Ewing, Chairperson

ATTEST:

Brenda McGruder, Auditor

11/14/2023 – 5:30 City Hall

Appendix A 30

**CENTRAL CITY
TOWN BOARD OF TRUSTEES
Minutes of Regular Meeting
November 14, 2023**

The November 14, 2023 meeting of the Central City Town Board of Trustees was called to order at 4:56 PM at the Central City Town Hall. Board members present were Donovan Renner, Rocky Mattson, Robyn Novotny. Also present: Shelly Bennett (Finance Officer).

MINUTES

The October 10, 2023 meeting minutes were presented and reviewed. Mattson made a motion to approve the minutes; it was seconded and passed.

VOUCHERS

Novotny made a motion, it was seconded and passed to approve 16 vouchers:
Sander Sanitation \$2,462.40 (Solid Waste); City of Lead \$82.98 (Pub Bldg Util); MDU \$40.04 (Pub Bldg Util); BH Pioneer \$128.11 (Legal Pub); Lynn's Dakotamart-Gas \$27.19 (Street Supp); Sturdevants \$1,282.13 (Street Maint); Ace Hardware \$54.97 (Council Exp); Summit Signs & Supply \$80.00 (Street Supp); Gould's Lawn & Tress Service \$45.00 (Parks & Rec); SDML \$651.34 (Insurance); Interstate Engineering \$8,524.96 (Street Maint); MG Oil Company \$3,091.72 (Street Supp, Parks & Rec); Donovan Renner \$695.33 (Payroll); Shelly Bennett \$461.75 (Salary FO); BH Energy \$482.87 (Street Lights, Pub Util); Lord's Cupboard \$500.00 (Cons & Develop).
TOTAL \$18,610.79.

FINANCE OFFICER'S REPORT

The Finance Officer's Report was presented for October 2023. A motion by Novotny to approve the report; it was seconded and carried.
Balance on 10/1/2023 \$625,652.27 (CDs \$414,029.19; Checking \$211,923.08). Revenues \$16,782.51; Expenditures \$6,534.35. Balance on 10/31/2023 \$637,419.41 (CDs \$415,248.17; Checking \$222,171.24).

COMMITTEE REPORTS

Sand has been replenished. Now have fuel for winter. Will put up Christmas lights around the end of November.

NEW BUSINESS

Kailey Snyder of Black Hills Council of Local Government was present to discuss Lawrence County Mitigation process for additional funding.

2nd Reading Ordinance 2022-3 Short Term Rentals. Mattson made a motion to approve the Ordinance, it was seconded and passed. Effective date of January 1, 2024.

2nd Reading Resolution 2023-9. Mattson made a motion to approve the Resolution, it was seconded and passed. Effective date of January 1, 2024.

1st Reading Ordinance 2023-10. Granting Midcontinent Communications to provide services to Central City residents.

2024 Uniform Alcoholic Beverage License Renewal Applications were reviewed and approved for Smokin Jay's, Pizza Lab, Lumpy's Casino Bar.

Public Notice of Big D Oil Uniform Alcoholic Beverage License is up for transfer to Broken Arrow Trading Company. Next public meeting to be held December 12, 2023.

Broken Arrow Trading Company is applying for Uniform Alcoholic Beverage License - Retail (on-off sale) Malt Beverage & SD Farm Wine.

ADJOURN

No further business to come before the Board. A motion made by Mattson was seconded and

Appendix A 31

carried to adjourn the meeting at 5:41 PM. The next regular meeting will be held Tuesday, December 12, 2023 at 5:00 PM at the Town Hall.

Central City Board President
Donovan Renner

ATTEST: Finance Officer
Shelly Bennett

**CENTRAL CITY
TOWN BOARD OF TRUSTEES
Minutes of Regular Meeting
December 12, 2023**

The December 12, 2023 meeting of the Central City Town Board of Trustees was called to order at 4:59 PM at the Central City Town Hall. Board members present were Donovan Renner and Robyn Novotny. Also present: Shelly Bennett (Finance Officer).

MINUTES

The November 14, 2023 meeting minutes were presented and reviewed. We made a small correction with the working of "Lawrence County Mitigation Plan process for additional funding" to just explaining the overall process of the update and the FEMA grant award. Novotny made a motion to approve the minutes; it was seconded and passed.

VOUCHERS

Novotny made a motion, it was seconded and passed to approve 13 vouchers:
Sander Sanitation \$2,462.40 (Solid Waste); City of Lead \$79.34 (Pub Bldg Util); MDU \$79.46 (Pub Bldg Util); BH Pioneer \$35.00 (Legal Pub); Sturdevants \$39.98 (Council Exp); SDML – Workers Comp. \$511.00 (Insurance); SDML – Membership Dues \$140.34 (Insurance); LC Highway Depart \$589.89 (Street Supp); Rocky Mattson \$207.79 (Salary Council); Robyn Novotny \$183.79 (Salary Council); Donovan Renner \$182.79 (Salary Council); Shelly Bennett \$595.92 (Salary FO, Office Supp); BH Energy \$500.53 (Street Lights, Pub Util).
TOTAL \$5,608.23.

FINANCE OFFICER'S REPORT

The Finance Officer's Report was presented for November 2023. A motion by Renner to approve the report; it was seconded and carried.
Balance on 11/1/2023 \$637,419.41 (CDs \$415,248.17; Checking \$222,171.24). Revenues \$8,034.13; Expenditures \$17,959.45. Balance on 11/30/2023 \$628,322.24 (CDs \$416,076.32; Checking \$212,245.92).

NEW BUSINESS

2nd Reading Ordinance 2023-10. Granting Midcontinent Communications to provide services to Central City residents. Novotny made a motion to approve the Ordinance, it was seconded and passed.

2nd Public meeting regarding the Uniform Alcoholic Beverage License transfer to Broken Arrow Trading Company. No public comments came before the Board. Novotny made a motion to approve the transfer, it was seconded and carried.

Broken Arrow Trading Company is applying for Uniform Alcoholic Beverage License - Retail (on-off sale) Malt Beverage & SD Farm Wine. Novotny made a motion to approve the application, it was seconded and carried.

ADJOURN

No further business to come before the Board. A motion made by Novotny was seconded and carried to adjourn the meeting at 5:11 PM. The next regular meeting will be held Tuesday, January 9, 2024 at 5:00 PM at the Town Hall.

Central City Board President
Donovan Renner

ATTEST: Finance Officer
Shelly Bennett

Lawrence County – Mitigation Planning Meeting (Lead Comprehensive Plan Meeting)

11/16/2023 – 11:00 Lead City Hall

[illegible]

CITY OF LEAD COMPREHENSIVE PLAN COMMISSION
MEETING MINUTES
November 16, 2023

CALL TO ORDER: Chair called the meeting to order at 11:02 am

PRESENT: Commission Members: Gordon Phillips, Deanna Rude, Kayla Klein, and Pam Hamilton. Quorum established. Also Present: Kailey Snider, Black Hills Council of Local Governments. Levi Wilson, guest.

MINUTES: Call to approve minutes from October meeting. Approved by unanimous consent.

OLD BUSINESS:

- Continued discussion and preparation for the new Comprehensive Plan led by Kailey Snider. The focus today was on creating a new Vision Statement. Draft Vision Statement: *Lead is a thriving and unique community embracing revitalization and connectedness.*

OTHER BUSINESS:

- The December meeting was rescheduled.

ANNOUNCED NEXT MEETING (December 11, 2023, 11:00 am at City Hall)

ADJOURNMENT

Motion for adjournment (m/Hamilton s/Rude) – Meeting adjourned at 12:03am.

Respectfully Submitted,

Pam Hamilton, Secretary

City of Lead
Comprehensive Plan Commission

Gordon D. Phillips, Chairman



Spearfish City Council Revised

Regular Session Agenda

December 4, 2023 5:30 p.m.

City Council Chambers, 625 5th Street, Spearfish

Join Zoom Meeting

<https://us02web.zoom.us/j/81912788155>

Meeting ID: 819 1278 8155

One tap mobile

+17193594580,,81912788155# US

+12532050468,,81912788155# US

Find your local number: <https://us02web.zoom.us/j/81912788155>

1. Call to Order

2. Pledge of Allegiance

3. Roll Call

4. Approve Agenda

5. Declaration of Any Potential Conflicts of Interest

- 6. Public Comment** - Public comments are welcome; however, no action can be taken by the Council on comments received for items not on this agenda. Anyone wishing to have the Council consider a new item should complete a Citizen Request Form to be reviewed by administration.

7. Consent Agenda

- A. Approve the minutes of the City Council regular session dated November 20, 2023.

8. Items from Visitors

- A. Black Hills Council of Local Governments – Lawrence County Hazard Mitigation Plan.

9. Finance

- A. Transfer \$18,000 from 202-Hospitality Tax Fund to 101-General Fund as budgeted.
- B. Transfer \$87,000 from 101-General Fund to 218-Spearfish Economic Revolving Fund, for 12/31/2023 and reverse as of 1/1/2024, to cover fund shortfall.
- C. Transfer \$100,000 from 101-General Fund to 201-Second Penny Sales Tax Fund, for debt service payments in 2023.

ADA Compliance: The City of Spearfish fully subscribes to the provisions of the Americans with Disabilities Act. If you desire to attend this public meeting and are in need of special accommodations, please notify the City Finance Office 12 hours prior to the meeting so that appropriate auxiliary aids and services are available.

- D. Approve the first reading of Ordinance 1388 – An Ordinance Supplementing the 2023 Appropriations Ordinance No. 1373 of the Code of Ordinances, City of Spearfish, South Dakota.

10. Planning & Zoning

- A. Approve the first reading of Ordinance 1387 – An Ordinance Amending Appendix A – Zoning of the Revised Ordinances of the City of Spearfish by Zoning Certain Property.

11. Public Works

- A. Approve the lowest responsive and responsible bid for the Main Street East Alley Waterline Replacement to A&L Contractors at a total amount of \$153,443.88.
- B. Approve the final under/over Change Order #2 for the Mountain Shadows Street Improvement Project for a net decrease of \$66,486.62 (-7.15%), final project cost of \$862,949.42, and approve the Certificate of Final Completion and Acceptance setting October 30, 2023 as the date the two year warranty begins.

12. Approve the bill list dated December 4, 2023

13. Mayor and Council

- A. Reappoint Sheleen Bauer and Fred Romkema to the Library Board of Trustees for three-year terms expiring 12/31/2026.
- B. Reappoint Meghan Byrum to the Planning Commission for a three-year term expiring 12/31/2026.
- C. Appoint Mark Tracy and Elizabeth Wefl and reappoint Kelley Dardis to the Park Recreation and Forestry Advisory Board for three-year terms expiring 12/31/2026.
- D. Reappoint Gregory Dias (expires 12/31/2025), Lennis Larson, Melissa Haught, Patricia Dias, Paul Thomson, and Randi Smith to the Historic Preservation Commission for three-year terms expiring 12/31/2026, unless otherwise noted.
- E. Appoint Marty Clark (council) and Michelle DeNeui (treasurer) to the Historic Preservation Commission as ex-officio members.

14. Departmental Discussion

- 15. Executive Session** – Hold an executive session pursuant to SDCL 1-25-2(3) for the purposed of consulting with legal counsel or reviewing communications from legal counsel about proposed or pending litigation or contractual matters.

16. Adjournment

12/04/2023 – 5:30 Spearfish City Hall

Appendix A 39



Spearfish City Council
Regular Session Minutes
December 4, 2023 5:30 p.m.

The Spearfish City Council met at 5:30 p.m. on Monday, December 4, 2023. Mayor Senden presided and called the meeting to order. Roll call was taken with the following members present: Clark, Hodgs, Hourigan, Jacobs, Klarenbeek, and Rath. Absent: None. Also present: City Attorney McDonald, Finance Officer DeNeui, Public Safety Director Rotert, Parks and Recreation Director Ehnes, Planning Director Kapsa, Public Works Director Broyles, and Assistant Public Works Director McMahon. All stood and recited the pledge of allegiance.

Clark moved, Rath seconded, and all voted to approve the revised agenda as presented. No potential conflicts of interest were noted.

Public Comment – At 5:31 p.m. a time for public comment was opened. Comments were received from resident John Dale regarding public comments at meetings and COVID vaccinations and resident Greg Moselle spoke on communications with the elected officials and not issuing debt. No further comments were received and the time for public comment was closed.

Consent Agenda – Clark moved, Rath seconded, and all voted to approve the consent agenda as follows:

- A. Approve the minutes of the City Council regular session dated November 20, 2023.

Hazard Mitigation Plan – Kailey Snyder from Black Hills Council of Local Governments discussed the beginning steps to updating the Lawrence County Hazard Mitigation Plan. This plan can be used by the city as well to qualify for Federal assistance during emergencies. Mayor Senden and City Planner Kapsa volunteered to be on the planning committee.

Transfer – Klarenbeek moved, Hourigan seconded, and all voted to transfer \$18,000 from 202-Hospitality Tax Fund to 101-General Fund as budgeted.

Transfer – Hourigan moved, Klarenbeek seconded, and all voted to transfer \$87,000 from 101-General Fund to 218-Spearfish Economic Revolving Fund, for 12/31/2023 and reverse as of 1/1/2024, to cover fund shortfall.

Transfer – Jacobs moved, Rath seconded, and all voted to transfer \$100,000 from 101-General Fund to 201-Second Penny Sales Tax Fund, for debt service payments in 2023.

Ordinance 1388 – Clark moved, Rath seconded, and all voted to approve the first reading of Ordinance 1388 – An Ordinance Supplementing the 2023 Appropriations Ordinance No. 1373 of the Code of Ordinances, City of Spearfish, South Dakota.

Ordinance 1389 – Hodgs moved, Klarenbeek seconded, and all voted to approve the first reading of Ordinance 1387 – An Ordinance Amending Appendix A – Zoning of the Revised Ordinances of the City of Spearfish by Zoning Certain Property.

Bid Award – Clark moved, Jacobs seconded, and with Clark, Hodgs, Hourigan, Jacobs, Klarenbeek, and Rath voting aye, motion passed to approve the lowest responsive and responsible bid for the Main Street East Alley Waterline Replacement to A&L Contractors at a total amount of \$153,443.88.

Final Project – Klarenbeek moved, Hodgs seconded, and with Clark, Hodgs, Hourigan, Jacobs, Klarenbeek, and Rath voting aye, motion passed to approve the final under/over Change Order #2 for the Mountain Shadows Street Improvement Project for a net decrease of \$66,486.62 (-7.15%), bringing the final project cost to \$862,949.42, and approve the Certificate of Final Completion and Acceptance setting October 30, 2023 as the date the two year warranty begins.

Bill List – Clark moved, Hodgs seconded, and with Clark, Hodgs, Hourigan, Jacobs, Klarenbeek, and Rath voting aye, motion passed to approve the bill list dated December 4, 2023, as follows:

<u>VENDOR NAME</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
ADVOCATES FOR HEALTH	AED TRAINING CARTRIDGE	\$165.00
AINSWORTH-BENNING INC	N AVE STREET REPAIR	\$121,546.67
AMAZON CAPITAL SERVICES	BOOKS-FANS-MOULDING-FAUCETS	\$5,515.51
AMERICAN ENGINEERING TESTI	MTN SHDWS & NORTH AVE STRT RPR	\$2,125.15
AMERICAN TREE AND FORESTRY	REMOVAL OF 2 TREES	\$2,799.98
ANTUNEZ	YEARS OF SERIVCE AWARD REC CNTR	\$150.00
BAKER & TAYLOR	BOOKS FOR LIBRARY	\$590.10
BEACH, JON	WATER TESTING EXAMS X 2 REIMB	\$120.00
BLACK HILLS ENERGY	OCT/NOV 2023 USAGE	\$7,237.62
BLACK HILLS CHEMICAL CORP	DETERGENT-TRASH BAGS-WIPES	\$1,801.41
BOMGAARS SUPPLY INC	SIPHON-TOOL BOX-JACK-WET DRY VAC	\$1,879.01
BUILDERS FIRSTSOURCE INC	PICKLEBALL REPAIR-ICE RINK BOX RBLD	\$321.26
BUTLER CAT- EFT ONLY	BIT AS CUTTE	\$388.49
CENGAGE LEARNING	BOOKS FOR LIBRARY	\$482.74
TMT INC	SQUEEGEE BLADE	\$187.29
CLAUSER MACHINE WORKS	BORE COUPLER TO FIT PUMP	\$35.00
CREEKSIDE DEVELOPMENT LLLP	OCT 23 TAX INCREMENT DUE	\$12,910.25
CROELL INC	M6 C15 DELIVERY TO CULVERS	\$602.00
DAKOTA PUMP INC	MASTER PANEL ENCLOSURE UPDATE	\$2,445.06
DC BOOTH SOCIETY INC	QUART ALLOCATION DEC 2023	\$12,500.00
DEMCO INC	WINTER BOOKMARKS	\$97.19
EAGLE AVIATION INC	FUEL	\$396.54
ELKHORN RIDGE @ FRAWLEY RA	OCT 23 TAX INCREMENT DUE	\$213,928.10
SEON SYSTEMS SALES INC	USER TRAINING	\$5,748.75
FMG INC	SNDSTN TRENCH SETTLEMENT	\$9,280.00
GRASS & GRIT LLC	AGGREGATE 3/4" GRAVEL EVANSPRK	\$816.33
GAMETIME	PLAYGROUND EQUIP PANEL REPLACE	\$5,176.18
VIEHAUSER ENTERPRISES LLC	REKEY WWTP LOCKS-KEYFOBS-KEY TAGS	\$3,544.43
GREAT WESTERN TIRE INC	CAP CASINGS-BALANCING-MOUNT TIRES	\$2,118.54
GUNDERSON TRUCKING INC	TRANSPORT #2 TO GILLETTE	\$2,660.00

HARGENS, GARY	MIDNIGHT SUN-ENTERTAINMENT	\$800.00
HAWKINS INC	CHLORINE CYNLINDERS	\$140.00
HDR ENGINEERING INC	SNDSTN SWR-WWTP MSTRPLN-	\$86,762.91
HEISLER HARDWARE	FASTENERS-CLAMP-REBAR-FAUCETS	\$1,741.44
HIGH PLAIN HERITAGE SCTY	QTR ALLOC DEC 2023	\$20,000.00
HILT CONSTRUCTION INC	WOODLAND LP GUARDRAIL RPR	\$1,713.00
SAMSON ONI	RETAINER FEES SKY RIDGE	\$4,000.00
JOHNER GRAVEL INC	CLEAN ROCK	\$711.17
JUNEK'S SERVICE CORP	TRANSMISSION OIL	\$181.37
LIGHTING MAINT CONTRACTS	STREET LIGHT REPAIR	\$3,698.83
MAINLINE CONTRACTING INC	LIFTSTATION SCH A PMNT 15	\$246,690.00
MATTHEWS INTL CORP	PLAQUE-ABRAHAM	\$187.00
MATTHEWS OPERA HOUSE	QUART ALLOC DECEMBER 2023	\$12,500.00
MONTANA-DAKOTA UTILITIES	CAMPGRND SHOP GAS	\$15.40
MONEY MOVERS	MONTHLY MAINT FEES REC CNTR	\$10.00
VAN DER VORSTE, RY W	2022 MONUMENT RELEVELS	\$5,000.00
NORTHERN HILLS VENTURES IN	DEC 23 MANAGED NTWRK 0365	\$21,768.28
NORTHWEST SCIENTIFIC INC	POLYSEED BOD SEED INOCULUM	\$138.44
NUTRIEN AG SOLUTIONS INC	PATHFINDER II	\$147.50
WEST RIVER TRANSIT AUTHORI	QTR ALLOC DECEMEBER 2023	\$11,250.00
PREMIER SAFETY	GAS H2S	\$724.95
RCS CONSTRUCTION INC	REMOVE SIDEWALK-PUMP RENTAL	\$3,453.35
ROCKINGTREE FLORAL/GARDEN	SPRINKLER BLOW OUT-WEEDING&SEED	\$8,807.50
SACRISON PAVING INC	ASPHALT PATCHING-MTN SHDWS STREETS	\$91,194.10
SDRS SPECIAL PAY PLAN	FEES NOV 2023 SPP	\$90.00
SDWWA	MEMBERSHIP RENEWALS X 13	\$130.00
SE GROUP	SD COMPREHENSIVE PLAN	\$22,038.19
SPEARFISH ECON DEVELOPMENT	QUARTERLY ALLOCATION DEC 2023	\$17,500.00
SHIVE-HATTERY, INC	FRAWLEY POND DREDGING	\$4,300.00
SUPERIOR SANITATION LLC	OCTOBER 23 RENTALS	\$704.00
TRANSOURCE TRUCK & EQUIPME	LIMIT SWITCH	\$419.66
TTG ENTERPRISES INC	CHECK ADJUST PID LOOP WWTP	\$160.00
VISIT SPEARFISH INC	BID BOARD NOV 23 COLLECTIONS	\$18,800.00
WEST TIRE & ALIGNMENT INC	RIMGUARD-LABOR PUMPING	\$864.00
INTEGRITY ACQUISITION LLC	KEY FOB-REAR DOOR ADJUST	\$602.21
WILLIAMS & ASSOCIATES	BANDSHELL	\$15,237.50
ZANDSTRA CONSTRUCTION	WDLNDS CLVRT APP2	\$359,544.25
Total		\$1,379,593.65

November 2023 Salary Expense & Credit Card Fees

	<u>Gross</u> <u>Wages/Benefits</u>		<u>Gross</u> <u>Wages</u>	<u>Benefits</u>	
Mayor/Council	\$8,981.00	1.10%	\$8,342.72	\$638.28	1.28%

City Administrator	21,084.20	2.58%	16,955.62	4,128.58	2.61%
City Attorney	11,663.02	1.43%	9,656.00	2,007.02	1.49%
Finance	28,063.14	3.43%	22,887.04	5,176.10	3.52%
Human Resources	9,907.46	1.21%	8,123.20	1,784.26	1.25%
Gov't Bldgs	19,418.57	2.37%	15,259.20	4,159.37	2.35%
Engineering	37,583.77	4.60%	30,200.01	7,383.76	4.65%
Public Safety Admin	25,662.18	3.14%	20,237.97	5,424.21	3.12%
Police	144,723.63	17.70%	114,035.45	30,688.18	17.56%
Fire	21,879.50	2.68%	18,027.80	3,851.70	2.78%
Bldg Inspection	24,387.10	2.98%	19,017.60	5,369.50	2.93%
Streets & Snow	82,550.27	10.09%	64,103.50	18,446.77	9.87%
Cemetery	78.77	0.01%	73.17	5.60	0.01%
Animal Control	4,684.31	0.57%	3,321.23	1,363.08	0.51%
Recreation/Aquatic	58,877.08	7.20%	47,509.06	11,368.02	7.31%
Parks	54,824.20	6.70%	43,214.35	11,609.85	6.65%
Library	33,903.17	4.15%	27,200.28	6,702.89	4.19%
Plan & Zone	21,600.25	2.64%	17,561.61	4,038.64	2.70%
Motor Pool	22,212.65	2.72%	16,946.37	5,266.28	2.61%
Wildland Fire	13,845.57	1.69%	11,507.07	2,338.50	1.77%
Police Comm	46,971.05	5.74%	36,445.97	10,525.08	5.61%
Water	23,371.96	2.86%	18,459.21	4,912.75	2.84%
Electric Production	17,875.07	2.19%	14,264.73	3,610.34	2.20%
Sewer	21,871.95	2.67%	17,300.26	4,571.69	2.66%
WWTP	35,296.47	4.32%	28,182.76	7,113.71	4.34%
Airport	183.97	0.02%	170.89	13.08	0.03%
Solid Waste	25,823.79	3.16%	20,060.87	5,762.92	3.09%
Campground	546.48	0.07%	460.00	86.48	0.07%
Totals	\$817,870.58	100.00%	\$649,523.94	\$168,346.64	100.00%
Banking Fees October	96.39				
Credit Card Fees					
October	\$14,408.31				
Grand Total	\$832,278.89				

Added or Adjusted Wages:

Employee	Position	Wage	Effective Date
Steve Hofmann	Police Sergeant	\$46.00	10/29/2023
Dustin Bush	Police Sergeant	\$38.70	10/29/2023
Sam Rosenau	Police Sergeant	\$35.06	10/29/2023
Chris Woods	Police Corporal	\$32.55	10/29/2023
Shawn Fox	Police Detective	\$35.93	10/29/2023
Sam Funk	Police Officer	\$32.55	10/29/2023
Austin Drapeaux	Police Officer	\$30.98	10/29/2023
Dustin Ruvolo	Police Officer	\$30.98	10/29/2023

Karsyn Black	Police Officer	\$30.23	10/29/2023
Hunter Bradley	Police officer	\$32.55	10/29/2023
Brad Johnson	Police Officer	\$30.23	10/29/2023
Alex Merchen	Police Officer	\$29.49	10/29/2023
Saul Torres	Police Officer	\$29.49	10/29/2023
Reece Walno	Police Officer	\$30.23	10/29/2023
Caleb Frerer	Police Officer	\$33.37	11/6/2023
Kaylee Cormier	Recreation Assistant FT	\$17.94	12/26/2023
McKenzie Bull	Recreation Assistant PT	\$16.31	11/12/2023
Petra Hansen	Customer Service Assistant PT	\$16.31	11/20/2023
Logan Beert	Customer Service Assistant PT	\$16.31	11/20/2023

Appointments and Reappointments

1. Klarenbeek moved, Hodgs seconded, and all voted to reappoint Sheleen Bauer and Fred Romkema to the Library Board of Trustees for three-year terms expiring 12/31/2026.
2. Clark moved, Rath seconded, and all voted to reappoint Meghan Byrum to the Planning Commission for a three-year term expiring 12/31/2026.
3. Jacobs moved, Hourigan seconded, and all voted to appoint Mark Tracy and Elizabeth Wefl and reappoint Kelley Dardis to the Park Recreation and Forestry Advisory Board for three-year terms expiring 12/31/2026.
4. Hourigan moved, Rath seconded, and all voted to reappoint Gregory Dias (expires 12/31/2025), Lennis Larson, Melissa Haught, Patricia Dias, Paul Thomson, and Randi Smith to the Historic Preservation Commission for three-year terms expiring 12/31/2026, unless otherwise noted.
5. Klarenbeek moved, Hourigan seconded, and all voted to appoint Marty Clark (council) and Michelle DeNeui (treasurer) to the Historic Preservation Commission as ex-officio members.

Executive Session – Clark moved, Rath seconded, and all voted to enter executive session at 6:03 p.m. pursuant to SDCL 1-25-2(3) for the purpose of consulting with legal counsel or reviewing communications from legal counsel about proposed or pending litigation or contractual matters.

The council returned to regular session at 6:30 p.m. There being no further business, Clark moved, Jacobs seconded, and all voted to adjourn at 6:30 p.m.

Dated this 4th day of December 2023.

Attest:

By: _____
John Senden, Mayor

Michelle DeNeui, City Finance Officer

Published once at the approximate cost of _____.

Lawrence County Natural Hazard Mitigation Plan – Lead Comprehensive Plan Meeting #4
12/11/2023

[illegible]

**CITY OF LEAD COMPREHENSIVE PLAN COMMISSION
MEETING MINUTES
December 11, 2023**

CALL TO ORDER: Chair called the meeting to order at 11:00am

PRESENT: Commission Members: Gordon Phillips, Deanna Rude, Robin Lucero, Kayla Klein, and Pam Hamilton. Quorum established. Also Present: Kailey Snider and Julianne Graham, Black Hills Council of Local Governments. Levi Wilson, guest.

MINUTES: Call to approve minutes from November meeting. Approved by unanimous consent.

OLD BUSINESS:

- Continued discussion and preparation for the new Comprehensive Plan led by Kailey Snider. Focus continues on Vision Statement, which will lead the goals identified in the Plan.
- Draft Vision Statement: *Lead is a thriving and unique community embracing revitalization and connectedness.*
- This draft Vision Statement was reviewed in the context of each chapter of the Plan. Each chapter was determined to be encompassed by this statement. No changes were proposed to the draft statement.
- Next steps: The land use map will be the next area of focus, which will likely take 2-3 meetings to complete. After the land use map, the board will review drafts of individual chapters as they are available. Kailey and Julianne have begun working on individual chapters.

OTHER BUSINESS:

- None.

ANNOUNCED NEXT MEETING (January 18, 2024, 11:00 am at City Hall)

ADJOURNMENT

Motion for adjournment (m/Klein s/Rude) – Meeting adjourned at 11:47am.

Respectfully Submitted,

Pam Hamilton, Secretary

City of Lead
Comprehensive Plan Commission

Gordon D. Phillips, Chairman



City Commission Regular Meeting Agenda

Monday, December 18, 2023 at 5:00 PM

City Hall, 102 Sherman Street, Deadwood, SD 57732

Public comments are welcomed, but no action can be taken by the Commission on comments received at this meeting. Anyone wishing to have the Commission vote on an item should call the Finance Office at 578-2600 by 5:00 p.m. on the Wednesday preceding the next scheduled meeting to be placed on the agenda.

1. **Call to Order and Pledge of Allegiance**

2. **Roll Call**

3. **Approve Minutes**

- a. Approval of December 4, 2023 City Commission minutes

4. **Approve Bills**

- a. Approval of Bill List for December 18, 2023

5. **Items from Citizens on Agenda**

- a. Deadwood Taxi Cab Owners Discussion on Rate Increase

6. **Consent Agenda**

Matters appearing on Consent Agenda are expected to be non-controversial and will be acted upon by the Commission at one time, without discussion, unless a member of the Commission requests an opportunity to address any given item. Items removed from the Consent Agenda will be discussed at the beginning of New Business.

- a. Update Part-time wage scale effective January 1, 2024.
- b. Permission to increase pay rates for Full-Time Police Officers to be \$24.22 per hour for Non-Certified and \$26.79 per hour for Certified Officers, effective January 1, 2024.
- c. Permission to hire Terri Tomford as part-time (up to 19 hours per week) lifeguard at \$16.00 per hour effective January 3 2024, pending pre-employment screening.
- d. Permission to hire Leah Blue-Jones as Zoning Coordinator at \$25.00 per hour (D15 rank) effective January 2, 2024, pending pre-employment screening.
- e. Permission to hire Andrew Nelson as full-time (non-certified) patrol officer at \$24.22 per hour effective December 27, 2023 pending pre-employment screening.
- f. Permission to approve revised job description for Police Administrative Assistant.
- g. Permission to allow HUB International Great Plains, to be the agent of record for City of Deadwood group Vision Service Plan effective Jan. 1, 2024.

- h. Permission to allow HUB International Great Plains to be the agent of record for City of Deadwood group Delta Dental plan effective Jan. 1, 2024.
- i. Permission to accept resignation for Krystal Stulken from the Library Board effective December 31, 2023.
- j. Appoint Brianne Hutchison to Library Board with term January 1 2024 thru December 31, 2026.
- k. Re-appoint Terri Bruce to Library Board with term January 1, 2024 thru December 31, 2026.
- l. Correct term date of Alison Ball on Library Board with term to be December 1, 2023 thru December 31, 2025.
- m. Permission to correct approved 2023 budget allocation to Twin City Animal Shelter from \$3,500.00 to \$3,250.00.
- n. Permission for Mayor to sign 2024 Combined Voting Agreement.
- o. Acknowledge issuance of 2024 City of Deadwood Medical Cannabis Dispensary license to Deadwood Growhouse dba Trails Head Cannabis Company at 32 Charles St.
- p. Acknowledge issuance of 2024 City of Deadwood Medical Cannabis Dispensary license to Deadwood From the Hills, LLC. at 460 Main St.
- q. Resolution 2023-20 Surplus Fire Equipment
- r. Permission to allow Fire Dept. to apply for SD Volunteer Personal Protective Equipment Grant program in the amount \$14,400.00 and allow Charles Fetter to sign all associated documents.
- s. Deadwood History Inc. requests approval to serve beer and wine at Homestake Adams Research and Cultural Center on Friday, February 23, 2024 from 6:00 p.m. to 9:00 p.m. for Calamity's Shindig.
- t. Permission to purchase 5500 gallons of non-ethanol fuel from South Side Service at a price of \$2.70 per gallon. Total purchase price not to exceed \$14,850.00. (To be paid by Streets Supply budget.)
- u. Permission for Mayor to sign Oakridge Cemetery Certificate of Purchases and Warranty Deed for Lavonne Harrison Mohr and Brian and Melody Nelson.
- v. Permission to pay 2024 leased equipment payments (attached) as indicated on Lease contracts/schedules. (To be paid Public Works Equipment budgets).
- w. Permission to extend existing professional services contract with Cindy Schneringer for administrative work associated with the Zoning Department until March 31, 2024.
- x. Permission for the Mayor to sign Loan Agreement 2024-001 for items currently on loan to and on exhibit with Deadwood History Inc. through December 31, 2029.
- y. Permission for the Mayor to sign the renewal of the Revolving Loan Agreement for 2024 between Deadwood Historic Preservation Commission and Neighborhood Housing Services of the Black Hills, Inc. for the administration of the RLF.

7. **Bid Items**

8. **Public Hearings**

- a. Set public hearing on January 2, 2024 for Convention Center (on-sale) Liquor (CL-15404), Package (off-sale) Liquor (PL-4522), Retail (on-off sale) Malt Beverage & SD Farm Wine (RB-2609) and Retail (on-off sale) Wine and Cider (RW-6401) License transfers from Earnest Hospitality LLC to Fools Gold Gaming, LLC dba Deadwood Gulch Resort.

9. **Old Business**

- a. First Reading of Ordinance #1389 Amending Chapter 3.20 Occupancy Tax, Business Improvement District 7.
- b. First Reading of Ordinance #1391 Amending Chapter 3.20 Occupancy Tax, Business Improvement District 9.

10. **New Business**

- a. Second Reading of Ordinance #1390 Amending Chapter 3.20 Occupancy Tax, Business Improvement District 8.
- b. Second Reading Ordinance #1392 Budget Supplement 5 for 2023
- c. Act as Board of Adjustment and approve/deny Conditional Use Permit - Bed & Breakfast Establishment - 388 & 390 Main Street - Nugget Saloon LLC (Wayne Morris) legally described as Lot Twelve (12) and the South Half of Lot Thirteen (13), Both Lots in Block Three (3) in the Fountain City Addition to the City of Deadwood, Together with all Improvements Thereon and Appurtenances Thereunto Belonging, Subject to Covenants, Restrictions and Reservations of Record.
- d. Act as Board of Adjustment and approve/deny Conditional Use Permit - Vacation Home Establishment - 606 1/2 Main Street - Nugget Saloon LLC (Wayne Morris) legally described as Lot 24, in Block 15 of the Original Townsite of the City of Deadwood, Lawrence County, South Dakota, According to the P.L. Rogers Map Except a Portion of Land Along the Southerly Side of Lot 24, Block 15 Being 8 Inches in Width Fronting on Main and Back of Even Width 100' as Set Forth in Deed and Recorded in Book 162 Page 243.
- e. Permission to accept Construction Change Order No. 1 from RCS Construction in the amount of \$37,588.67 for required bio-engineering of an Envirolok wall for the Whitewood Creek Restoration project (FEMA Project).
- f. Permission to accept Construction Change Order No. 2 from RCS Construction in the amount of \$3,612.00 for Trolley Lane Area changes needed for semi trailer turning radiuses for the Whitewood Creek Restoration project (FEMA Project).
- g. Permission to accept and allow Mayor to sign Construction Change Order No. 1 for Timm Lane Bridge project with Corr Construction for use of temporary bridge rather than culvert crossing. No cost change order.
- h. Acknowledge Pay App #3 for Timm Lane Bridge project in the amount \$168,843.99 from Corr Construction.

- i. Permission to pay Rasmussen to install two 1.5 Ton HP Mini Split for Crows Nest at Days of '76 Rodeo Grounds in an amount not to exceed \$15,012.00. (To be paid by HP Capital Assets.)
- j. Permission to pay Wilen Monument in the amount of \$8,075.00 for repairs to several monuments in Mt. Moriah cemetery. (To be paid by Historic Cemetery Repairs Enterprise fund budget.)
- k. Permission to purchase from Projex up to \$6,000.00 of colored lamp post lighting to complete project from 157 Charles St. (Southside) to 402 Main St. (Big D). (To be paid by Streets Repair budget.)
- l. Permission to expend \$39,000.00 to the Deadwood Volunteer Fire Department for pay-per-call project. (To be paid from 2023 Fire Department Recruitment/Retention line item.)
- m. Permission to purchase new hot tub for Recreation and Aquatic Center in an amount not to exceed \$15,000.00 (To be paid by 2024 Rec Center Equipment budget.)
- n. Permission to pay Crysteel Truck Equipment in the amount of \$13,804.00 for a new dump box for F-600 Sander Truck. (To be paid by Streets Equipment budget.)
- o. Permission to purchase four 10" Wedge Gate valves for the Denver Street Pump Station from Dakota Pump at a cost of \$3,350.00 each and not to exceed \$13,400.00. (To be paid by Water Repair budget.)
- p. Permission to pay Rockstaz to refinish carriage room/basement of Days of '76 Museum at an amount not to exceed \$40,796.00. (To be paid by HP Capital Assets.)
- q. Permission to hire Jacobs Welding to replace 35 foot section of handrailing on Forest Ave in an amount not to exceed \$3,935.00. (Safety repair to be paid by Streets Sidewalk budget.)

11. **Informational Items and Items from Citizens**

- a. Lawrence County Mitigation Plan Update by Kailey Snyder with Black Hills Council of Local Governments.

12. **Executive Session**

- a. Executive Session for Personnel Matters per SDCL1-25-2 (1) w/ possible action
Executive Session for Legal Matters per SDCL1-25-2 (3) w/ possible action

13. **Adjournment**

This will be a public Meeting conducted through Zoom. To participate, join Zoom Meeting

URL: <https://us02web.zoom.us/j/6055782082?pwd=Z1QrRXhXaXp4eStPSjg2YjVTNUtZQT09>

Meeting ID: 605 578 2082

Password: 1876

One tap mobile: 669-900-9128

*Please practice the CDC's social distancing recommendations.
Please be considerate of others and if you no longer have business activities during the
meeting, do not feel obligated to remain.*

Lawrence County – Mitigation Planning Meeting (Deadwood Commission Meeting)

12/18/2023 – 5:00 Lead City Hall

[illegible]

REGULAR MEETING, DECEMBER 18, 2023

The Regular Session of the Deadwood City Commission convened on Monday, December 18, 2023 at 5:00 p.m. in the Deadwood City Commission Chambers, 102 Sherman Street, Deadwood, South Dakota. Mayor David Ruth Jr. called the meeting to order with the following members present: Department Heads, City Attorney Matt Naasz, and Commissioners Michael Johnson, Sharon Martinisko and Charlie Struble. Commissioner Gary Todd was absent. All motions passed unanimously unless otherwise stated.

APPROVAL OF MINUTES

Struble moved, Martinisko seconded to approve the minutes of December 4, 2023. Roll Call: Aye-All. Motion carried.

APROVAL OF DISBURSEMENTS

Martinisko moved, Johnson seconded to approve the December 18, 2023 disbursements as amended. Roll Call: Aye-All. Motion carried.

A & B WELDING	SUPPLIES	301.11
ACE HARDWARE	SUPPLIES	147.09
ADAMS SALVAGE RECYCLING	SERVICE	197.70
ALBERTSON ENGINEERING	PROJECT	13,192.90
ALCOPRO	SUPPLIES	1,197.15
ALPINE IMPRESSIONS	SERVICE	155.00
AMAZON CAPITAL	SUPPLIES	2,098.00
ANFINSON, BONNY	REIMBURSMENT	84.13
ARROWHEAD FORENSICS	SUPPLIES	413.03
ASSOCIATION FOR RURAL	MEMBERSHIP	30.00
AVID4 ENGINEERING	PROJECT	2,645.00
BH CHEMICAL	SUPPLIES	260.28
BH ENERGY	SERVICE	27,763.87
BH PIONEER	SERVICE	1,154.99
BH SPECIAL SERVICES	CLEANING	4,500.00
BH TITLE	LAND	45,242.40
BLACKSTRAP	SUPPLIES	4,938.12
BRANDON INDUSTRIES	SUPPLIES	3,187.00
BROWN, MOLLY	MEETINGS	315.00
BRUCE, DAVID	MEETINGS	350.00
CAPFIRST EQUIPMENT FINANCE	PAYMENT	24,333.76
CARMODY, ROBIN	MEETINGS	350.00
CENTURY BUSINESS PRODUCTS	CONTRACT	181.14
CITY OF LENNOX	GRANT	10,000.00
CORR CONSTRUCTION	PAY APP	168,843.99
CRESCENT ELECTRIC SUPPLY	SUPPLIES	150.00
CULLIGAN	SUPPLIES	116.40
CURTIS BLUE LINE	SUPPLIES	23.75
DAKOTA FLUID POWER	WASHER	8,524.69
DAKOTA LUMBER	GRANTS	7,153.70
DAR, VICKI	MEETINGS	385.00
DAYS INN MITCHELL	LODGING	235.50
DEADWOOD ALIVE	NOVEMBER	4,000.00
DEADWOOD CHAMBER	SERVICE	80,775.26
DEADWOOD JAM	ALLOCATION	25,000.00
DEADWOOD MOUNTAIN GRAND	SERVICE	54.00
DEMCO	SUPPLIES	299.72
DIEDE, LEO	MEETINGS	315.00
DMC WEAR PARTS	SUPPLIES	1,226.22
EAGLESON, CHARLES	MEETINGS	315.00
EMANUEL, DENESE	GRANT	7,500.00
EXCEL CONSTRUCTION	PROJECT	18,367.38
FETERL, RONDA	REIMBURSEMENT	29.61
FIB CREDIT CARDS	SUPPLIES	2,847.94
FREDERICKSON LAW OFFICE	SERVICE	1,500.00
GALLS	UNIFORMS	41.81
GAYLORD BROS.	SUPPLIES	2,183.83
GLOBAL INDUSTRIAL	SUPPLIES	14.05
GLOVER, SANDY	REIMBURSEMENT	498.62
GOLDEN WEST	SERVICE	3,539.50
GOODE, BONITA	REIMBURSEMENT	82.82
GUNDERSON, PALMER, NELSON	SERVICE	2,222.60
HILLS INTERIORS	PROJECT	2,470.10
HOMESTAKE CONCRETE & MORE	PROJECT	9,450.00
HOMETOWN MANUFACTURING	SUPPLIES	186.69
IPS GROUP	SERVICE	5,769.61
IWORQ	SERVICE	12,400.00
JLG ARCHITECTS	PROJECT	1,345.00
JOHNSON CONTROLS FIRE	SERVICE	927.20
JOHNSTONE SUPPLY	PROJECT	4,779.57
KEEHN, JOSH	MEETINGS	350.00
KEYSTONE RIDGE DESIGNS	SUPPLIES	3,738.00
KNECHT	SUPPLIES	191.84
KNIPPER, ANITA	REIMBURSMENT	81.43
KONE CHICAGO	MAINTENANCE	537.17
KVN SERVICES	PROJECT	12,165.62
LARSON, MARY	REIMBURSMENT	100.00
LAWRENCE CO. REGISTER	SERVICE	120.00
LEAD-DEADWOOD SANITARY	SERVICE	19,574.30
LYNN'S	SUPPLIES	104.26
MARTINISKO, JOHN	MEETINGS	315.00
MENARD'S	SUPPLIES	133.45

REGULAR MEETING, DECEMBER 18, 2023

MICROSOFT	SERVICE	1,403.98
MIDWEST TAPE	SUPPLIES	77.22
MONUMENT HEALTH	SERVICE	520.00
MORRISON, RONDA	SERVICE	1,730.00
MR. LIFTER'S	PROJECT	6,213.76
MS MAIL	SERVICE	5,090.02
NARTEC	SUPPLIES	488.40
NATIONAL TRUST FOR HISTORI	MEMBERSHIP	250.00
NORTHERN TRUCK EQUIPMENT	SNOWFLOW	15,445.00
ONSITE FIRST AID	SUPPLIES	151.75
OWENS, MELVIN	MEETINGS	350.00
PANNIER	SERVICE	2,402.00
PARHAM, MICHAEL	PROJECT	30,070.13
PEARSON, JACI	PROJECT	2,700.00
PETTY CASH	FINANCE	32.45
PONDEROSA LAND SURVEYS	SERVICE	783.75
POSEY, BEVERLY	MEETINGS	420.00
QUICKTROPHY	SUPPLIES	29.27
QUIK SIGNS	SERVICE	95.40
QUILL	SUPPLIES	65.94
RASMUSSEN MECHANICAL	PROJECT	2,333.20
REDWOOD TOXICOLOGY LAB	SERVICE	150.22
SABO CONSTRUCTION	PROJECT	35,500.00
SALOON #10	SUPPLIES	50.00
SANDER SANITATION	SERVICE	12,933.90
SANTOCHI, TREVOR	MEETINGS	420.00
SCHNERINGER, CINDY	SERVICE	1,172.50
SCOTT PETERSON MOTORS	SERVICE	527.98
SD ASSN. OF RURAL WATER	DUES	590.00
SD COMMISSION ON GAMING	CITY SLOTS	29,829.55
SD DEPT. OF MOTOR VEHICLES	SERVICE	26.70
SD DEPT. OF REVENUE	TAX	2,979.80
SD LIBRARY ASSOCIATION	MEMBERSHIP	20.00
SD WATER & WASTEWATER	MEMBERSHIP	20.00
SERVALL	SUPPLIES	1,220.03
SHER, CALEB	SERVICE	450.00
SIMON MATERIALS	SUPPLIES	332.28
SNAP-ON TOOLS	SUPPLIES	3,780.00
SODAK TITLE	SERVICE	120.00
SOUTHSIDE SERVICE	SERVICE	1,447.59
SPRIGLER, SALLY	REIMBURSEMENT	125.47
STAN HOUSTON EQUIP	SUPPLIES	632.99
STURDEVANT'S	SUPPLIES	2,468.48
STURGIS RESPONDER SUPPLY	UNIFORMS	517.88
SUMMIT SIGNS AND SUPPLY	SUPPLIES	1,371.00
SUNSHINE TOWING	SERVICE	115.00
TALLGRASS LANDSCAPE	PROJECT	1,850.00
TEMPERATURE TECHNOLOGY	SERVICE	351.00
THE ARCHAEOLOGICAL CONSERV	DUES	30.00
THE LIBRARY STORE	SUPPLIES	80.94
THE LORD'S CUPBOARD	RECYCLING	65.40
TRITECH SOFTWARE SYSTEMS	SERVICE	7,397.40
TWIN CITY ANIMAL SHELTER	FUNDING	3,250.00
TWIN CITY HARDWARE	SUPPLIES	1,149.33
TWIN CITY HARDWARE	GRANTS	101.91
TWIN CITY HARDWARE	GRANTS	247.96
VERIZON CONNECT	SERVICE	171.60
VERIZON CONNECT NWF	SERVICE	92.95
VIEHAUSER ENTERPRISES	SERVICE	417.59
VIGILANT BUSINESS SOLUTION	SCREENING	806.00
WARREN, DR.ROBERT E.	SERVICE	1,000.00
WELLS PLUMBING	SUPPLIES	2,950.74
WESTERN STATES FIRE	SERVICE	470.00
WILLIAMS, ANTHONY	MEETINGS	315.00

Total \$742,224.76

ITEMS FROM CITIZENS ON AGENDA

Discussion

Deadwood Taxicab Owners discussion on rate increase has been removed from agenda.

CONSENT

Martinisko moved, Johnson seconded to omit Item D and approve the following consent items.

Roll Call: Aye-All. Motion carried.

- A. Update Part-time wage scale effective January 1, 2024.
- B. Permission to increase pay rates for Full-Time Police Officers to be \$24.22 per hour for Non-Certified and \$26.79 per hour for Certified Officers, effective January 1, 2024.
- C. Permission to hire Terri Tomford as part-time (up to 19 hours per week) lifeguard at \$16.00 per hour effective January 3 2024, pending pre-employment screening.
- D. Removed from agenda.
- E. Permission to hire Andrew Nelson as full-time (non-certified) patrol officer at \$24.22 per hour effective December 27, 2023 pending pre-employment screening.
- F. Permission to approve revised job description for Police Administrative Assistant.
- G. Permission to allow HUB International Great Plains, to be the agent of record for City of Deadwood group Vision Service Plan effective Jan. 1, 2024.

REGULAR MEETING, DECEMBER 18, 2023

- H. Permission to allow HUB International Great Plains to be the agent of record for City of Deadwood group Delta Dental plan effective Jan. 1, 2024.
- I. Permission to accept resignation for Krystal Stulken from the Library Board effective December 31, 2023.
- J. Appoint Brianne Hutchison to Library Board with term January 1 2024 thru December 31, 2026.
- K. Re-appoint Terri Bruce to Library Board with term January 1, 2024 thru December 31, 2026.
- L. Correct term date of Alison Ball on Library Board with term to be December 1, 2023 thru December 31, 2025.
- M. Permission to correct approved 2023 budget allocation to Twin City Animal Shelter from \$3,500.00 to \$3,250.00.
- N. Permission for Mayor to sign 2024 Combined Voting Agreement.
- O. Acknowledge issuance of 2024 City of Deadwood Medical Cannabis Dispensary license to Deadwood Growhouse dba Trails Head Cannabis Company at 32 Charles St.
- P. Acknowledge issuance of 2024 City of Deadwood Medical Cannabis Dispensary license to Deadwood From the Hills, LLC. at 460 Main St.
- Q. Resolution 2023-20 Surplus Fire Equipment

RESOLUTION NO. 2023-20

TO DECLARE THE FOLLOWING SURPLUS PROPERTY

BE IT RESOLVED by the Deadwood City Commission that the City of Deadwood approved the following be declared surplus and sold to St. Onge Fire Department for \$70.00, allowable under SDCL 6-5-2:

Light Bars and Control Box (front and back)

BE IT RESOLVED by the Deadwood City Commission that the City of Deadwood approved the following be declared surplus and sold to Lead Fire Department for \$450.00, allowable under SDCL 6-5-2:

Pump/Foam Engine Pump Air Compressor

BE IT RESOLVED by the Deadwood City Commission that the City of Deadwood approve the following to be declared surplus and destroyed:

4 - 100 FT Links of LDH Supply Hose

Dated this 4th day of December, 2023

ATTEST:

/s/ Jessica McKeown, Finance Officer

CITY OF DEADWOOD

/s/ David Ruth Jr., Mayor

- R. Permission to allow Fire Dept. to apply for SD Volunteer Personal Protective Equipment Grant program in the amount \$14,400.00 and allow Charles Fetter to sign all associated documents.
- S. Deadwood History Inc. requests approval to serve beer and wine at Homestake Adams Research and Cultural Center on Friday, February 23, 2024 from 6:00 p.m. to 9:00 p.m. for Calamity's Shindig.
- T. Permission to purchase 5500 gallons of non-ethanol fuel from South Side Service at a price of \$2.70 per gallon. Total purchase price not to exceed \$14,850.00. (To be paid by Streets Supply budget.)
- U. Permission for Mayor to sign Oakridge Cemetery Certificate of Purchases and Warranty Deed for Lavonne Harrison Mohr and Brian and Melody Nelson.
- V. Permission to pay 2024 leased equipment payments (attached) as indicated on Lease contracts/schedules. (To be paid Public Works Equipment budgets).
- W. Permission to extend existing professional services contract with Cindy Schneringer for administrative work associated with the Zoning Department until March 31, 2024.
- X. Permission for the Mayor to sign Loan Agreement 2024-001 for items currently on loan to and on exhibit with Deadwood History Inc. through December 31, 2029.
- Y. Permission for the Mayor to sign the renewal of the Revolving Loan Agreement for 2024 between Deadwood Historic Preservation Commission and Neighborhood Housing Services of the Black Hills, Inc. for the administration of the RLF.

REGULAR MEETING, DECEMBER 18, 2023

PUBLIC HEARINGS

Set

Martinisko moved, Struble seconded to set public hearing on January 2, 2024 for Convention Center (on sale) Liquor (CL-15404), Package (off sale) Liquor (PL-4522), Retail (on-off sale) Malt Beverage & SD Farm Wine (RB-2609) and Retail (on-off sale) Wine and Cider (RW-6401) License transfers from Earnest Hospitality LLC to Fools Gold Gaming, LLC dba Deadwood Gulch Resort. Roll Call: Aye-All. Motion carried.

OLD BUSINESS

First Readings

Finance Officer McKeown spoke about the address/ownership changes and all short term rentals have been added. Martinisko moved, Struble seconded to approve first reading of Ordinance #1389 Amending Chapter 3.20 Occupancy Tax, Business Improvement District 7. Roll Call: Aye-All. Motion carried.

McKeown spoke about the ownership changes and properties electing to do \$2.00 instead of \$1.00. Johnson moved, Martinisko seconded to approve first reading of Ordinance #1391 Amending Chapter 3.20 Occupancy Tax, Business Improvement District 9. Roll Call: Aye-All. Motion carried.

NEW BUSINESS

Second Readings

McKeown stated no changes between first and second. Struble moved, Martinisko seconded to approve second reading of Ordinance #1390 Amending Chapter 3.20 Occupancy Tax, Business Improvement District 8. Roll Call: Aye-All. Motion carried.

McKeown spoke about the update to General, FEMA, Water, Parking and Transportation Funds with the amount of budget supplement not increasing. Martinisko moved, Struble seconded to approve second reading of Ordinance #1392 Budget Supplement 5 for 2023. Roll Call: Aye-All. Motion carried.

Conditional Use Permits

Planning, Zoning and Historic Preservation Officer Kuchenbecker spoke about the permit. Struble moved, Martinisko seconded to Act as Board of Adjustment and approve Conditional Use Permit - Bed & Breakfast Establishment - 388 & 390 Main Street - Nugget Saloon LLC (Wayne Morris) with conditions, which are: Conditional Use Permit runs with the applicant and not the land; therefore should the property be sold, the Conditional Use Permit is null and void, Bed and Breakfast Establishment must provide family style meals by the operator, Proof of a state sales tax number, Proof that the Building Inspector has inspected the building and meets all building codes, City water and sewer rates be changed from residential to commercial rates, proper paperwork is filed with the City of Deadwood Finance Office for BID taxes, Proof of City of Deadwood Business License, Obtain lodging license after inspection from the SD Department of Health, and all parking shall be off street. Legally described as Lot Twelve (12) and the South Half of Lot Thirteen (13), Both Lots in Block Three (3) in the Fountain City Addition to the City of Deadwood, Together with all Improvements Thereon and Appurtenances Thereunto Belonging, Subject to Covenants, Restrictions and Reservations of Record. Roll Call: Aye-All. Motion carried.

Kuchenbecker spoke about the permit. Johnson moved, Struble seconded to Act as Board of Adjustment and approve Conditional Use Permit - Vacation Home Establishment - 606 1/2 Main Street - Nugget Saloon LLC (Wayne Morris) with conditions, which are: Conditional Use Permit runs with the applicant and not the land; therefore should the property be sold, the Conditional Use Permit is null and void, Proof of a state sales tax number, Proof that the Building Inspector has inspected the building and meets all building codes, City water and sewer rates be changed from residential to commercial rates, proper paperwork is filed with the City of Deadwood Finance Office for BID taxes, Proof of City of Deadwood Business License, Obtain lodging license after inspection from the SD Department of Health, and all parking shall be off street preferably validated in the Broadway Parking Ramp.

REGULAR MEETING, DECEMBER 18, 2023

Legally described as Lot 24, in Block 15 of the Original Townsite of the City of Deadwood, Lawrence County, South Dakota, According to the P.L. Rogers Map Except a Portion of Land Along the Southerly Side of Lot 24, Block 15 Being 8 Inches in Width Fronting on Main and Back of Even Width 100' as Set Forth in Deed and Recorded in Book 162 Page 243. Roll Call: Aye-All. Motion carried.

Change Order

Kuchenbecker spoke about the FEMA Project. Discussion was held concerning the wall along the Mickelson trail. Martinisko moved, Johnson seconded to accept and allow Mayor to sign Construction Change Order No. 1 from RCS Construction in the amount of \$37,588.67 for required bio-engineering of an Envirolok wall for the Whitewood Creek Restoration project (FEMA Project). Roll Call: Aye-All. Motion carried.

Change Orders

Kuchenbecker spoke about the FEMA Project. Struble moved, Martinisko seconded to accept and allow Mayor to sign Construction Change Order No. 2 from RCS Construction in the amount of \$3,612.00 for Trolley Lane Area changes needed for semi-trailer turning radiuses for the Whitewood Creek Restoration project (FEMA Project). Roll Call: Aye-All. Motion carried.

Public Works Director Stalder spoke about the project. Martinisko moved, Johnson seconded to accept and allow Mayor to sign Construction Change Order No. 1 for Timm Lane Bridge project with Corr Construction for use of temporary bridge rather than culvert crossing. No cost change order. Roll Call: Aye-All. Motion carried.

Pay App

McKeown stated acknowledgement is necessary due to the grant funding requirement. Martinisko moved, Struble seconded to acknowledge Pay App #3 for Timm Lane Bridge project in the amount \$168,843.99 from Corr Construction. Roll Call: Aye-All. Motion carried.

Pay

Stalder spoke about the project. Struble moved, Martinisko seconded to pay Rasmussen to install two 1.5 Ton HP Mini Split for Crow's Nest at Days of '76 Rodeo Grounds in an amount not to exceed \$15,012.00. (To be paid by HP Capital Assets.) Roll Call: Aye-All. Motion carried.

Pay

Parks, Recreation & Events Director Adler spoke about the repairs. Martinisko moved, Struble seconded to pay Wilen Monument in the amount of \$8,075.00 for repairs to several monuments in Mt. Moriah cemetery. (To be paid by Historic Cemetery Repairs Enterprise fund budget.) Roll Call: Aye-All. Motion carried.

Purchase

Stalder spoke about the purchase. Martinisko moved, Johnson seconded to purchase from Projex up to \$6,000.00 of colored lamp post lighting to complete project from 157 Charles St. (Southside) to 402 Main St. (Big D). (To be paid by Streets Repair budget.) Roll Call: Aye-All. Motion carried.

Project

McKeown spoke about the project. Struble moved, Johnson seconded to expend \$39,000.00 to the Deadwood Volunteer Fire Department for pay-per-call project. (To be paid from 2023 Fire Department Recruitment/Retention line item.) Commission thanked the Volunteer Fire Department for their service. Roll Call: Aye-All. Motion carried.

Purchase

Adler spoke about the purchase. Stuble moved, Johnsons seconded to purchase a new hot tub for Recreation and Aquatic Center in an amount not to exceed \$15,000.00 (To be paid by 2024 Rec Center Equipment budget.) Roll Call: Aye-All. Motion carried.

Pay

Stalder spoke about the purchase. Martinisko moved, Johnsons seconded to pay Crysteel Truck Equipment in the amount of \$13,804.00 for a new dump box for F-600 Sander Truck. (To be paid by Streets Equipment budget.) Roll Call: Aye-All. Motion carried.

REGULAR MEETING, DECEMBER 18, 2023

Purchase

Stalder spoke about the purchase. Martinisko moved, Struble seconded to purchase four 10" Wedge Gate valves for the Denver Street Pump Station from Dakota Pump at a cost of \$3,350.00 each and not to exceed \$13,400.00. (To be paid by Water Repair budget.)

Pay

Kuchenbecker spoke about the project. Martinisko moved, Struble seconded to pay Rockstarz to refinish carriage room/basement of Days of '76 Museum at an amount not to exceed \$40,796.00. (To be paid by HP Capital Assets.)

Hire

Adler spoke about the repair. Martinisko moved, Struble seconded to hire Jacobs Welding to replace 35 foot section of handrailing on Forest Ave in an amount not to exceed \$3,935.00. (Safety repair to be paid by Streets Sidewalk budget.)

INFORMATIONAL ITEMS AND ITEMS FROM CITIZENS

- A. Kailey Snyder with Black Hills Council of Local Government spoke about the Lawrence County Mitigation Plan Update. She stated the plan is through FEMA and is required to be updated every 5 years with the current plan expiring in August 2024. This grant will be looking at natural hazards that impact Lawrence County.

Attorney Naasz requested Executive Session for legal matters per SDCL 1-25-2(3) and personnel matters per SDCL 1-25(1) with possible action.

ADJOURNMENT

Martinisko moved, Struble seconded to adjourn the regular session at 5:41 p.m. and convene into Executive Session for legal matters per SDCL 1-25-2(3) and personnel matters per SDCL 1-25-2(1) with possible action. The next regular meeting will be on Tuesday, January 2, 2024 at 5:00 p.m.

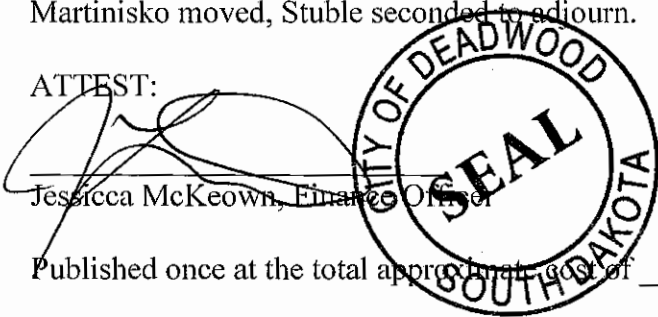
After coming out of executive session at 6:16 p.m.,

Martinisko moved, Struble seconded to accept termination of Patrol Officer Jamie Willimas effective at 4:00 p.m. on December 19, 2024. Roll Call: Aye-All. Motion carried.

Martinisko moved, Johnson seconded to hire Leah Blue-Jones as Zoning Coordinator at \$24.00 per hour (D14) rank effective January 2, 2024 pending pre-employment screening. Roll Call: Aye-All. Motion carried.

Martinisko moved, Stuble seconded to adjourn.

ATTEST:



Jessicca McKeown, Finance Officer

DATE: 1/2/24

BY: Gary Todd / Fred
David Ruth Jr., Mayor

Published once at the total approximate cost of _____



**AGENDA
LEAD CITY COMMISSION
REGULAR MEETING
LEAD CITY HALL
801 W. MAIN STREET, LEAD,
SD
December 18, 2023, 5:00 PM**

A. ROLL CALL

B. PLEDGE OF ALLEGIANCE

C. APPROVE MINUTES

1. Approve the Minutes of the December 4th, 2023, Regular Meeting

D. ITEMS FROM VISITORS

E. LIBRARY

F. PLANNING & ZONING/HIST. PRES./COMP PLAN

G. PUBLIC SAFETY

H. BUILDING INSPECTIONS/HEALTH SAFETY

1. Approve CUP for 123 S Stone Street
2. Community Center update will be on January 2, 2024 Agenda.

I. PUBLIC WORKS

1. Job opening in Public Works Department.

J. BILLS

K. HEARINGS

1. Mill Street public comments about project progress.
2. Lewies off sale beer license hearing.

L. LEGAL AND FINANCE

1. Financial Report (2nd meeting of month)
2. Approve combined vote agreement.

M. ITEMS FROM MAYOR & COMMISSIONERS

1. City Hall closed December 25, 2023. Observance of Christmas.

N. MEETINGS/ANNOUNCEMENTS

1. Next Regular Meeting- Wednesday, December 27th, 2023 @ 12:00 PM- Lead City Hall *special meeting to do 2023 close out of financing.
2. Planning & Zoning- December 26th @ 5:00 PM- Lead City Hall
3. Comprehensive Plan- January 18th @ 11:00 AM- Lead City Hall
4. Historic Preservation- December 20th @ 4:00 PM- Lead City Hall

O. EXECUTIVE SESSION

1. Potential Litigation/Legal issue (if needed)
2. Personnel (if needed)

P. ADJOURN

This meeting will also be live streamed through **Facebook Live**, viewable through the City of Lead's Facebook page. The live stream will begin at approximately 4:58 PM on December 18th, 2023. If further information or assistance is needed, please call Lead City Hall at 605-584-1401.

12/18/2023 – 5:00 Lead City Hall

[illegible]

LEAD CITY COMMISSION
Regular Meeting
December 18, 2023

The Lead City Commission met on Monday, December 18, 2023, in City Hall, 801 West Main Street at 5:00 PM with the following members present: Acting Mayor Kayla Klein and Commissioners Roger Thomas, Dustin Heupel, and Robert Carr. Absent: Mayor Ron Everett. Acting Mayor Kayla Klein called the Regular Meeting to order. The Pledge of Allegiance was recited.

APPROVE MINUTES

1. Minutes of December 4, 2023, Regular meeting are approved as read.

ITEMS FROM VISITORS

1. Kaylee Sneider- Lawrence County Mitigation Plan- Kaylee stated this plan is required to be updated every five years and now is the time this needs to be updated. The plan will be ready for review early spring/summer. Lead will adopt the plan, and this will become Lead's plan as well. A Planning Team will need to be set up for discussion by the end of next week.
2. Resident Bill Millard has approached the city to purchase a lot in the Washington district but until the steps are taken, he is asking for a temporary permit to park. He will get together with Chief Williams to discuss.

PLANNING & ZONING/HIST.PRES. /COMP PLAN

1. Special County Election at the Visitors Center 7AM to 7PM—Rock Quarry CUP

PUBLIC SAFELY

1. Chief Williams stated they will be doing extra patrolling on Mill Street due to speeding complaints.
2. Chief Williams stated one of the grants they get through NITSA, they will be doing DUI saturations from December 14th through January 1st so there will also be extra patrolling during these dates as well.

BUILDING INSPECTIONS/HEALTH SAFETY

1. CUP—123 S. Stone Street—Ronna Finley- M/Carr, S/Thomas- Carried to approve CUP for Ronna Finley for a Bed and Breakfast.
2. Community Center Update—January 2, 2024

PUBLIC WORKS

1. Job opening in the Streets Department, please stop into City Hall to fill out and drop off an application/resume or send application/resume to Jasonb@cityoflead.com. If you have any questions, please call City Hall at 605-584-1401.

BILLS

M/Carr, S/Thomas- Carried to approve the Bills in the amount of \$175,565.54 (payables) \$107,201.40 and (wages) \$68,364.14.

Vendor	Amount
ACE HARDWARE	\$ 1,174.13
BARRY'S ELECTRIC	\$ 330.00
BLACK HILLS COUNCIL OF LOCAL GOV'T	\$ 10,000.00
BLACK HILLS PIONEER	\$ 504.43
BLACK HILLS PURE, INC	\$ 51.25
BLACK STRAP INC	\$ 2,383.40
DEADWOOD DENTAL	\$ 496.00
DIGITAL DESIGNS	\$ 2,655.00
DISCOUNT MAGAZINE SUBSCRIPTION SERVICE, INC.	\$ 459.89
FASTENAL COMPANY	\$ 499.99
FLOYD'S TRUCK CENTER	\$ 1,203.40
HEARST LIBRARY	\$ 1,679.70
HONEYWELL INC	\$ 1,876.83
JACOBS PRECISION WELDING, INC.	\$ 1,021.99
JERRY GREERS ENGINEERING	\$ 1,372.96
JOHNER PAVING	\$ 599.42
KIWANIS CLUB OF LEAD	\$ 95.90
KNECHT HOME CENTER/SPEARFISH	\$ 380.19
LEAD/DEADWOOD SANITARY DIST	\$ 37,270.49
MACK'S AUTO BODY LLC	\$ 2,152.10
MCLEODS	\$ 199.02
MIDCONTINENT TESTING LAB	\$ 98.00
NORTHWEST PIPE FITTINGS, INC	\$ 7,476.88
RAPID DELIVERY INC	\$ 15.60
RUNNINGS SUPPLY INC	\$ 49.99
SANDER SANITATION	\$ 27,788.70
SERVALL TOWELL & LINEN, INC.	\$ 958.73
SIMON NORTH REGION SD	\$ 733.90
SOUTH DAKOTA ONE CALL	\$ 33.60
SOUTHSIDE OIL CO., INC.	\$ 928.32
DR. RED STONE, DDS	\$ 250.00
THAT PLACE IN LEAD	\$ 281.80
VERIZON WIRELESS	\$ 550.09
WESTERN FIRST AID SAFETY	\$ 652.49
WHITES CANYON MOTORS	\$ 84.50
MID-CONTINENT	\$ 892.71
Total Amount	\$ 107,201.40
PAYROLL	
Mayor/Commission	\$ 1,246.60
Finance	\$ 5,879.46
Govt Buildings	\$ 2,637.93
Police	\$ 21,111.61
Snow	\$ 15,399.03
health Inspections	\$ 4,959.02
Parks	\$ 2,509.40
Library	\$ 6,385.43
Water	\$ 8,235.66
Total Amount	\$ 68,364.14

HEARINGS

1. Mill Street Project Progress Public Comments
M/Carr, S/Thomas -Carried to open the Mill Street Project for Public Comments.
There were no attendees or comments for the Mill Street Project.
M/Carr, S/Thomas- Carried to Close the Mill Street Project for Public Comments.
2. Set Hearing—Lewies Off-Sale Beer License- M/Thomas, S/Carr- Carried to set hearing for Lewies Off-Sale Beer License.

LEGAL AND FINANCE

1. November 2023 Financial Report- M/Carr, S/Thomas- Carried to approve the November 2023 Financial Report in the amount of \$621,700.77.

- 2. Approve Combined Vote Agreement- M/Carr, S/Thomas- Carried to approve Combined Vote agreement with surrounding areas for April 9, 2024.

ITEMS FROM MAYOR & COMMISSIONERS

- 1. City Hall Closed December 25, 2023—Observance of Christmas

MEETING/ANNOUNCEMENTS

- 1. Next Regular Meeting—December 27th (Special Meeting) @ 12:00 PM Lead City Hall
- 2. Planning & Zoning—December 26th @ 5:00 PM Lead City Hall
- 3. Comprehensive Plan—January 18th @ 11:00 AM Lead City Hall
- 4. Historic Preservation—December 20th @ 5:00 PM Lead City Hall

ADJOURN

M/Thomas, S/Carr—Carried to adjourn Regular Meeting at 5:23PM.

CITY OF LEAD

ATTEST

Kayla Klein, Acting Mayor
(SEAL)

John Wainman, City Administrator



Lead Comprehensive Planning Commission

Meeting Agenda for Thursday, January 18, 2024

11:00 AM Lead City Hall 801 W. Main St., Lead, SD

1. CALL TO ORDER
2. ROLL CALL, Establish a Quorum
3. APPROVE MINUTES OF December 11th MEETING [**ACTION**]
4. OLD BUSINESS
 - Continuing the preparations for the new Comprehensive Plan led by Julianne Graham, Black Hills Council of Local Governments.
 - Land Use map
5. OTHER BUSINESS
6. SET NEXT REGULAR MEETING DATE (Thursday, February 15, 2024, 11:00 am at City Hall)
7. CALL FOR ADJOURNMENT [**ACTION**]

CITY OF LEAD COMPREHENSIVE PLAN COMMISSION
MEETING MINUTES
January 17, 2024

CALL TO ORDER: Chair called the meeting to order at 11:05 am

PRESENT: Commission Members: Gordon Phillips, Robin Lucero, and Pam Hamilton. Quorum established. Also Present: Kailey Snider, Black Hills Council of Local Governments. Levi Wilson, guest.

MINUTES: Call to approve minutes from December 2023 meeting. Approved by unanimous consent.

OLD BUSINESS:

- Continued discussion of the new Comprehensive Plan led by Kailey Snider, focusing on the Land Use Map.
- Proposed land use categories: residential, commercial, industrial, mixed use, civic, school, parks and rec, parking, and open space.
- Levi Wilson (Planning and Zoning) provided an analysis of Lead land value, attached.
- Julianne will likely facilitate next month in Kailey's absence; discussion will continue.

OTHER BUSINESS:

- None

ANNOUNCED NEXT MEETING (February 15, 2024, 11:00 am at City Hall)

ADJOURNMENT

Motion for adjournment (m/Hamilton s/Lucero) – Meeting adjourned at 12:19 pm.

Respectfully Submitted,

Pam Hamilton, Secretary

City of Lead
Comprehensive Plan Commission

Gordon D. Phillips, Chairman

Lawrence County – Mitigation Planning Meeting (LEPC Meeting 2)

01/18/2024 – 12:00 Spearfish

Name	Representing (City, County, Dept, etc.)	Title	Round-trip miles traveled	Phone	Email	Do you want to receive email updates on the plan status and future meeting dates?
Brian Hamblet	S&P Ambulance	Director				
Paul Thompson	LCEM	Emergency Mgr	30			Yes
Therese Robbins	SD Foundation Medical	Risk Mgr	829			or Yes
Brandy Petersen	SD OEM	Regional Coordinator	90			5
Berry Vansick	SURF EAT	ERT Supervisor	20			Yes
Barb Baker	LCEM	Admin Secretary	30			Yes
Clint Finn	Coeur d'Alene	S. Safety Coord.	40			Yes
Jim Brown	Coeur d'Alene	Safety Manager	40			Yes
Charles Fetter	City of Dendwood	Fire Technician	30			Yes
Corey Compton	BHSU	DIRECTOR PUB SAFETY	5			Yes
Jeremy Garatte	Wheeler Lumber	Supervisor	10			Yes
Heather Fox	SD DOT	Preparedness ^{Coordination}	90			Yes
Ray Black	SDWF	AFMO	30			Yes
Cody Griffiee	SDWF	FMO	30			Yes
Matthias Barta	SFP / Neiman	Environmental	10			Yes



The Lawrence County LEPC met in Spearfish at noon on January 18, 2024 at Spearfish Holiday Inn.

Present were: Brian Hambek LEPC Vice President; Paul Thomson, LEPC Secretary-Treasurer and LC EM; Barb Baker, LC EM; Barry VanSickle, Sanford Lab; Charles Fetter, Dwd FD; Clint Finn, Coeur-Wharf; Jim Brown Coeur-Wharf; Corey Compton BHSU; Heather Fox SDDOH; Brandy Petersen, SDOEM; Matthias Barton, Neiman; Renee Robbins, SDFMC; Ray Black, SDWF, Cody Griffie, SDWF; Jeremy Garoutte, Wheeler Lumber
All motions unanimously approved unless otherwise stated.

Vice President Brian Hambek, led the meeting in President Ken Hawki's absence.

Conflict of Interest Declarations: No Conflicts declared.

Minutes: I change in the minutes Motion by Baker, 2nd by Fetter to approve the Oct 26th minutes. Motion passed.

Financial Report:

October Checking Account Balance:	\$ 1,467.81
Expenses: 10/26/23 October Meeting – Cheyenne Crossing	269.90
10/31/23 Black Hills Pioneer newspaper mtg ad	<u>14.85</u>
Current Checking Account Balance:	\$ 1,183.06

Motion by Charles Fetter, 2nd by Clint Finn to approve the financial report as presented.
Motion carried.

Haz Mat Business:

A. Spill report: (Copies Attached)

- 11/20/2023 - Big D Oil Co. storage tank removal – Central City
- 11/20/2023 – Thyssen Mining – Closure – Ross Head Frame
- 11/27/2023 – Gunderson Trucking – Diesel release, St. Onge
- 12/28/2023 – BJ's Country Store – Diesel release, Whitewood
- 01/04/2024 – Gunderson Trucking – Closure - Whitewood

- **Haz Mat Discussion:** Charles presented Multi Gas tester that could be purchased with the remaining LEPC Grant funds. The tester is \$1049 and the regulator is \$135, together would

be \$1284. The Air bottle would be the responsibility of the Fire Dept. Motion to buy the Tester and Regulator for SCVFD Barb Baker, 2nd Barry VanSickle – Motion to have an MOU signed – Barb Baker 2nd Matthias Barton

Regular Business:

- **Sanford Lab Update:** Barry gave a progress report on Sanford Lab activities. Cold weather shut down the fans Oro Hondo fan shut down causing and up casting @ the Ross Headframe – essential personnel only. 3 Caverns almost complete. The tramway will stay in place but will not be operating.
- **Coeur-Wharf Update:** Clint Finn 1 year no accidents

Training: Ray Black SDWF – 2024 Rushmore Fire Conference Feb 17th -18th offering ATV training class and certification, 4 classes and an online course 1st. They also have a link for ICS 300/400 to do virtually. Barb Baker – Pipeline Emergency Response Training Feb 6 Branding Iron in Belle Fourche, Mass Fatality Management Conference April 29 – May 1st

Vote on By Laws: After reviewing the new changes and notating a couple more changed that needed to be made a motion was made by Barry VanSickle 2nd by Barb Baker to accept the changes and approve the new By Laws.

New Business:

Election of Officers: The group nominated Brian Hambek for President of the LC LEPC he was voted as the President of the Lawrence County LEPC for the year. Voting continued with Clint Finn being voted as Vice President and Barb Baker as Secretary-Treasurer for the upcoming year.

Other Business:

- A. **Lawrence Co LEOP** Paul has been working on updating the LEOP using the new template. He is halfway through. It is due the end of September.
- B. **Homeland Security Grant:** Brandy Petersen the grant applications are due February 15, 2024.
- C. **Pre-Disaster Mitigation Grant:** Barb reported on behalf of Kailey Snyder – All local Governments have been met with. The plan does expire in August of 2024. The next step is to get a planning team put together and setting the first planning meeting.
- D. **POD & DOH Updates:** Renee Robbins reported that there are 32 Pods in 28 cities. Our designated spot is BHSU for dispensing. The High School is the backup. The Pod Plan has 15 annexes, MOU, and Heather Fox, Ron Moeller and Barb Baker did a recent site survey. A few changes are being made.
- E. **Yearly OEM Exercise Requirements:** Paul Thomson/Brandy Petersen LCSAR did a table top exercise that was a missing person, we may continue with that subject. Once a subject has been declared, it has to continue through the full scale.

Attendee discussion / Notes:

Barry VanSickle brought up that they also offered the Training Tower for Rope Rescue. The proper forms will have to be completed.

Next meeting: April – Location and date will be determined.

Lawrence County – Mitigation Planning Meeting (Planning Team Meeting)

02/09/2024 – 1:00 Lead

[illegible]

02.09.2024

The Mitigation Planning Team had their first meeting to discuss hazard and risk in Lawrence County. The planning team was asked to work on Mitigation Packet to provide information needed for the plan update. The team was also given a draft of the public survey and asked to provide comments. In attendance: Lawrence County, Central City, Deadwood, Lead, Spearfish, and Whitewood.



Lead Comprehensive Planning Commission

Meeting Agenda for Thursday, March 21, 2024

11:00 AM Lead City Hall 801 W. Main St., Lead, SD

1. CALL TO ORDER
2. ROLL CALL, Establish a Quorum
3. APPROVE MINUTES OF February 15th MEETING [**ACTION**]
4. OLD BUSINESS
 - Continuing the preparations for the new Comprehensive Plan led by Kailey Synder and Julianne Graham, Black Hills Council of Local Governments.
 - Land Use map
5. OTHER BUSINESS
6. SET NEXT REGULAR MEETING DATE (Thursday, April 18, 2024, 11:00 am at City Hall)
7. CALL FOR ADJOURNMENT [**ACTION**]

3/21/24	Lead City Hall
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Appendix A 73

CITY OF LEAD COMPREHENSIVE PLAN COMMISSION
MEETING MINUTES
March 21, 2024

CALL TO ORDER: Chair called the meeting to order at 11:03 am

PRESENT: Commission Members: Gordon Phillips, Deanna Rude, Robin Lucero, and Pam Hamilton. Quorum established. Also present: Levi Wilson, Lead Planning and Zoning; Kailey Snider, Black Hills Council of Local Governments.

MINUTES: Call to approve minutes from February 2024 meeting. Approved by unanimous consent.

OLD BUSINESS:

- Continued discussion of the new Comprehensive Plan led by Kailey Snider.
- The ‘Parks and Recreation’ draft chapter was reviewed and revised. Discussion will continue at the next meeting.

OTHER BUSINESS:

- None

ANNOUNCED NEXT MEETING (April 18, 2024, 11:00 am at City Hall)

ADJOURNMENT

Motion for adjournment (m/Rude /Lucero) – Meeting adjourned at 12:07 pm.

Respectfully Submitted,

Pam Hamilton, Secretary

City of Lead
Comprehensive Plan Commission

Gordon D. Phillips, Chairman

3/21/24 - Lead City Ad

[illegible]

03.21.2024

Lead and Central City met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Lead. During the discussions Lead updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.

Lawrence County – Mitigation Planning Meeting (Spearfish 1:1)
03/25/2024 – 2:00 at Spearfish City Hall

[illegible]

03.25.2024

Spearfish met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Spearfish. During the discussions Spearfish updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.

04/10/2024 – 10:00 at City Hall

Appendix A 79

04.10.2024

Spearfish met again with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Spearfish. During the discussions Spearfish updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.

04/19/2024 – 1:00 at Deadwood City Hall

Appendix A 81

04.19.2024

Deadwood met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Deadwood. During the discussions Deadwood updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.

Lawrence County – Mitigation Planning Meeting (Fire Meeting)
05/14/2024 – 7:00 at Whitewood Fire Hall

[illegible]

05.14.2024

Lawrence County EM and BHCLG spoke with local fire groups to discuss wildfire risk in Lawrence County. As part of this meeting fire groups were asked to identify high risk areas.

AGENDA

Spearfish Canyon Fire Protection District Board And Spearfish Canyon Volunteer Fire Department

Monday, June 24, 2024

- 1. Call to Order**
- 2. Secretary's Report**
- 3. Treasurer's Report**
- 4. Old Business**
 - a. Sign Repaired – Donation by Time Peterson of Flat Earth Signs
 - b. Nozzels and new hose added
 - c. Thermal Imaging Camera added
 - d. Accountant added to go over books as needed
 - e. All Board vacancies have been filled (introduce Board)
 - f. Windsock is still to be installed on building.
- 5. New Business**
 - a. 10-year Plan is right on schedule
 - b. Paving of the parking lot – 2 bids rec'd Board approved the Johner bid for the project.
 - i. Sacrisson Paving \$38,000 we do the grading, etc.
 - ii. Johner Paving \$28,000 and they do everything
- 6. Natural Hazards Mitigation Plan Update –**
Lawrence County Emergency Manager Paul Thomson
- 7. Calls (1 to Spearfish Canyon Lodge for a fall)**
- 8. Training**
 - a. Saturday, July 15th 9am to Noon
 - b. Thursday, July 23rd 6:30pm to 9:30pm
 - c.
- 9. Next Meeting**
 - a. SCVFD – Monday, July 29th at 6pm with potluck
 - b. SCFPD Board Meeting – Saturday, October 12th at 9am
- 10. Adjournment**

6/24/24

SCVFD

✓ ~~A/M~~

✓ ~~Aden Atter~~

~~Mary Kay~~

✓ Scott & Patsy Wanstall

✓ WALT MAITAVERNE

Paul Thomson

MARK DEY

✓ ANDREW CLEM

- Bill & Mary Kay Fennel

o. Maury & Pam

Steve Fox

Lisa Fox

JD Geisler

Mary Hendricks

Don Harvey

Shirley Harvey

- ~~Pat Brown~~

Tera Dey

Joe Doerges

Maury & Pam Hangland

Don & Dex Hecimur

Mark & Mary Lou Brasae

SPEARFISH CANYON VOLUNTEER FIRE DEPARTMENT
MINUTES.
JUNE 24, 2024

The meeting was called to order by Chief Gerry Bennett at 1830 hours.

Volunteer Members present: G. Bennett, T. Dey, S. Wanstedt, JD Geigel, A. Altergott, P. Thomson, D. Harvey, M. Dey, A. Clem, R. Brannan and D. Anderson and guests of Spearfish Canyon.

All motions are unanimously approved unless otherwise stated.

Secretary's Report: Minutes of the April meeting was read, there were no May minutes due to no meeting in May. Motion by A. Altergott to approve, seconded by M. Dey.

Treasurer's Report:	Checking:	\$78,142.71
	Money Market:	\$37,220.06
	Total:	\$115,362.77

Scott noted that donations were received from the Barbara Wanstedt Memorial - \$575, Steve Butsko Memorial - \$125.00, Bonnie McGinnis Memorial - \$1000. The loan balance is \$197,411.07 with the next payment due in November for \$19,774.97. Motion by R. Brannan, seconded by A. Clem to approve.

OLD BUSINESS:

- Sign Repair – is finished and donated time by Tim Peterson of Flat Earth Sign.
- Nozzles & New Hose have been added to the trucks.
- A Thermal Imaging Camera has been added to Engine 1.
- We have hired an accountant to look over the books when needed.
- All Board vacancies have been filled.
- Still waiting on the windsock to be installed on the building.

NEW BUSINESS:

- The 10-year plan is right on schedule.
- We have received two bids for the paving of the parking lot and the Board has approved to go with the bid from Johner paving.
 - Johner Paving bid - \$28,000 and they do all the work.
 - Sacrisson Paving bid - \$38,000 and we do all the prep work.
- Brush 2 is in the process of getting a new engine, which was approved prior by the Board. The repair bill is estimated at \$28,000, with a \$13,000 downpayment.
- Lawrence County Emergency Manager Paul Thomson spoke in regard to the Natural Hazardous Mitigation Meeting coming up on Friday at the Spearfish City Hall from

SPEARFISH CANYON VOLUNTEER FIRE DEPARTMENT
MINUTES.

JUNE 24, 2024

1:00-2:00 in the afternoon. He indicated briefly what the meeting was about and the negative impacts that could happen to citizens of the county should we ever face a natural disaster in this area.

- Training was held by the Lead Fire Department for the building that was in Terraville to be burned down.
- Adam Altergott, with Altergott Forestry spoke to the group in regard to wildfire prevention in the canyon and that there is no open burning in the canyon. If anyone needs assistance with cleaning up or clearing trees, Adam left his information on the table for them to contact him,

CALLS:

- The department had one call this last month at the Lodge for a fall.

TRAINING:

- Saturday, July 13th from 9am to noon.
- Thursday, July 25th from 6:30 to 9:00 pm.

NEXT MEETING:

- Next meeting for Spearfish Canyon Fire will be Monday, July 29th at 6:00 pm with a potluck supper with guests from the canyon.
- Next meeting for Spearfish Canyon Fire Protection District will be Saturday, October 12th at 9:00am.

The meeting adjourned at 1930 hours.

Respectfully submitted.

Tera Dey, Secretary

Lawrence County – Mitigation Planning Meeting (Community Meeting)
06/28/2024 – 1:00 at Spearfish City Hall

Name	Representing (City, County, Dept, etc.)	Title	Round-trip miles traveled	Phone	Email	Do you want to receive email updates on the plan status and future meeting dates?
MATT SLEEP	BUTTE ELECTRIC	CEO	90			yes c.com
Paul Thomson	Lawrence County	Emergency Manager	35			Yes
Barb Baker	Lawrence County	Emergency Man	35			yes
Karl Jensen	Lawrence Co Construction Dist.	Chairman	38			yes
Cherlyn Leach Valades	citizen	CEO of my home	2			yes
Joe Valades	attendee	retiree	2			yes
Rich Prezkula	citizen	—	5			yes
Amy Goreba	City of Deadwood	Admin	35 10			yes com
Adam McMahon	City of Spearfish	PW Director	0			Yes
Jaymie Ecker	City of Spearfish Citizen	P+Z	0			NO
Mitch Iversen	Lawrence Co. Natural Res. Committee	Board member	0			yes

Lawrence County – Mitigation Planning Meeting (Community Meeting)

06/28/2024 – 1:00 at Spearfish City Hall

Name	Representing (City, County, Dept, etc.)	Title	Round-trip miles traveled	Phone	Email	Do you want to receive email updates on the plan status and future meeting dates?
John Senter	Marshall MI Lawrence	Mayor	—			
Andrew Larson	Spearfish Flanham	TP Admin/ Staff Engineer	—			Yes

06.28.2024

Lawrence County and BHCLG held a community meeting open to the public to discuss mitigation risks, vulnerabilities, and mitigation actions in Lawrence County. Adopting members in attendance: Lawrence County, Spearfish, and Deadwood.

Community Meetings Invitees

1. Emergency Management; 2. Fire Groups; 3. Government; 4. Economic Development; 5. Land Use and Development; 6. Health and Social Services; 7. Natural and Cultural Resources; 8. Safety and Security; 9. Infrastructure; 10. Health and Medical; 11. Energy/Communications; 12. Hazardous Materials; 13. Education

Agency	Lifeline	Contact Method
BLM	2, 3	Email
USFS	2, 3, 7	Email
SD Wildland Fire	2, 3	Email
SD DARN Forestry	2, 3, 7	Email
Lawrence County Conservation Dist.	2, 3, 7	Email
KLJ	4, 5	Email
DGR	4, 5	Email
Terrasite Design	4, 5	Email
Interstate Engineering	4, 5	Email
HDR	4, 5	Email
Pennington County EM	1, 3, 8, 12	Email
Butte County EM	1, 3, 8, 12	Email
Meade County EM	1, 3, 8, 12	Email
Weston County EM	1, 3, 8, 12	Email
Crook County EM	1, 3, 8, 12	Email
SD OEM Regional Coord.	1, 3, 8, 12	Email
SD GOED	4, 5	Email
Deadwood Economic Dev.	4, 5	Email
Spearfish Chamber	4	Email
Deadwood Chamber	4	Email
SD DOT	9	Email
Lead-Deadwood School Dist.	13	Email
Spearfish School Dist.	13	Email
BHSU	13	Email
Monument Health	6, 10	Email
Sandford Lab	7	Email
Neiman	4, 9	Email
Coeur	4, 9	Email
NOAA (Regional)	1, 8	Email
Black Hills Energy	11	In-person (phone)
Butte Electric	11	Email
	1	Email

Invitees also include Lawrence County LEPC, local governments through Planning Team.

Lawrence County – Mitigation Planning Meeting (Whitewood 1:1)
07/22/2024 – 1:00 at Whitewood City Hall

Name	Representing (City, County, Dept, etc.)	Title	Round-trip miles traveled	Phone	Email	Do you want to receive email updates on the plan status and future meeting dates?
Jim Smit	Building Dept. Whitewood	Building Insp.				l.com
DT Werlinger	Public Works Whitewood	Public Work Sup				com

07.22.2024

Whitewood met again with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in Whitewood. During the discussions Whitewood updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.

Lawrence County – Mitigation Planning Meeting (County 1:1)

09/4/2024 – 10:30 at Lawrence County Offices

[illegible]

09.04.2024

Lawrence County met with BHCLG for a one-on-one meeting to discuss the unique risks and vulnerabilities in the county. During the discussions Lawrence County updated mitigation actions for the 2018 plan and created new strategies for this updated version of the plan.

11.06.2024

BCHLG met briefly with Central City representative to discuss drainage hazards in the town and potential mitigation actions.

Appendix B

Weather Event History

Hazard Probability

Future Hazard Probability					
Event Type	Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
Probability	High	High	High	Med	Med
Calculations Based Off Historical Data					
Number of years with events	108	99	62	34	25
Years of recorded data	128 years (1895-2023)	128 years (1895-2023)	128 years (1895-2023)	128 years (1895-2023)	128 years (1895-2023)
Probability of future events including climate variations	86%	80%	50%	29%	23%
Probability calculation	108/128=0.84	99/128=0.77	62/128=0.48	34/128=0.27	25/128=0.20

Future probability of drought future occurrence based on National Integrated Drought Information System (National Integrated Drought Information System. *Drought Conditions for Lawrence County: Historical Conditions for Lawrence County*)

Future Hazard Probability		
Event Type	Cold Wave	Heat Wave
Probability	Med	Low
Calculations Based Off Historical Data		
Number of days with historical events	6	1
Number of years with historical events	6	1
Years of recorded data	26 years (1997-2023)	17 years (2006-2023)
Possible number of days with event per year	0.23	0.06
Probability of future events including climate variations	23%	6%
Occurrence calculation	6/26 = 0.23	1/17 = 0.06
Probability calculation	6/26 = 0.23	1/17 = 0.06

CZ_NAME_STR	BEGIN_DATE	BEGIN_TIME	EVENT	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
NORTHERN FOOT HILLS (ZONE)	1/9/1997	1200	Cold/Wind Chill	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/9/1997	1200	Cold/Wind Chill	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/30/2017	1800	Cold/Wind Chill	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/30/2017	1800	Cold/Wind Chill	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/1/2018	0	Cold/Wind Chill	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/1/2018	0	Cold/Wind Chill	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/14/2021	0	Cold/Wind Chill	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/14/2021	0	Cold/Wind Chill	0	0	0	0

CZ_NAME_STR	BEGIN_DATE	BEGIN_TIME	EVENT	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
NORTHERN BLACK HILLS (ZONE)	12/16/2016	2000	Extreme Cold/Wind Chill	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/16/2016	2000	Extreme Cold/Wind Chill	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/21/2022	0	Extreme Cold/Wind Chill	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/21/2022	0	Extreme Cold/Wind Chill	0	0	0	0
CZ_NAME_STR	BEGIN_DATE	BEGIN_TIME	EVEN	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	7/15/2006	700	Heat	0	0	0	0

Future Hazard Probability			
Event Type	Flash Flood	Flood	
Probability	High	Med	
Calculations Based Off Historical Data			
Number of days with hist. events	12	10	
Number of years with hist. events	10	7	
Years of recorded data	27 years (1996-2023)	27 years (1996-2023)	
Possible number of days with event per year	0.44	0.37	
Prob. of future events	37%	26%	
Occurrence calculation	12/27 = 0.44	10/27 - 0.37	
Probability calculation	10/27 - 0.37	7/27 = 0.26	

Probability of future flooding occurrence including future climate variations. Calculations based partially on NOAA weather data can be found in Appendix B. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	MAG	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
LAWRENCE CO.	LEAD	6/14/1996	1800	Flash Flood		0	0	0	0
LAWRENCE CO.	DEADWOOD	6/14/1996	1800	Flash Flood		0	0	0	0
LAWRENCE CO.	LEAD	7/24/1997	1400	Flash Flood		0	0	0	0
LAWRENCE CO.	DEADWOOD	8/8/2002	1512	Flash Flood	3	0	0	200000	0
LAWRENCE CO.	DEADWOOD	8/24/2002	1556	Flash Flood	3	0	0	50000	0
LAWRENCE CO.	LEAD	7/1/2004	1330	Flash Flood		0	0	250000	0
LAWRENCE CO.	CHEYENNE CROSSING	7/6/2008	2015	Flash Flood		0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	8/3/2010	1145	Flash Flood		0	0	250000	0
LAWRENCE CO.	SPEARFISH	6/5/2015	1700	Flash Flood		0	0	0	0
LAWRENCE CO.	SPEARFISH	7/17/2018	1800	Flash Flood		0	0	0	0
LAWRENCE CO.	NEMO	7/3/2019	1800	Flash Flood		0	0	200000	0
LAWRENCE CO.	LEAD	7/4/2019	2000	Flash Flood		0	0	297000	0
LAWRENCE CO.	SPEARFISH	6/23/2023	1530	Flash Flood		0	0	0	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TIME	EVENT	DEATHS_DIRECT	INJURIES_DIRECT	DAMAGE_PROPERTY	DAMAGE_CROPS
NORTHERN BLACK HILLS (ZONE)		5/27/1996	700	Flood	0	0	0	0

NORTHERN FOOT HILLS (ZONE)		5/27/1996	700	Flood	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/18/1998	800	Flood	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/1/2007	800	Flood	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/1/2007	2100	Flood	0	0	0	0
LAWRENCE CO.	ST ONGE	5/6/2008	200	Flood	0	0	0	0
LAWRENCE CO.	ST ONGE	5/23/2008	1100	Flood	0	0	0	0
LAWRENCE CO.	GALENA	6/4/2008	1430	Flood	0	0	1000000	0
LAWRENCE CO.	SPEARFISH	5/21/2011	1230	Flood	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/21/2011	1230	Flood	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/1/2013	300	Flood	0	0	50000	0
LAWRENCE CO.	LEAD	7/5/2019	130	Flood	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/23/2023	1800	Flood	0	0	0	0

Future Hazard Probability	
Event Type	High/Severe Wind
Probability	High
Calculations Based Off Historical Data	
Number of days with historical events	84
Number of years with historical events	27
Years of recorded data	27 years (1996-2023)
Possible number of days with event per year	3.11
Probability of future events including climate variations	100%
Occurrence calculation	84/27 = 3.11
Probability calculation	27/27 = 1

Probability of high wind occurrences. Calculations based on NOAA weather data. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

CZ_NAME_STR	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	MAGNITUDE	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
NORTHERN FOOT HILLS (ZONE)	2/10/1996	300	High Wind	55	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/24/1996	1500	High Wind	70	0	0	10000	0
NORTHERN BLACK HILLS (ZONE)	4/24/1996	1500	High Wind	62	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	7/1/1997	900	High Wind	60	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	7/1/1997	900	High Wind	60	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/12/1997	1000	High Wind	50	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/12/1997	1000	High Wind	50	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	11/22/1998	1540	High Wind	57	0	0	0	0
NORTHERN BLACK HILLS / LAWRENCE EXCEPT N / LAWRENCE EXCEPT SW MEADE (ZONE)	11/22/1998	1610	High Wind	52	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/3/1999	730	High Wind	57	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/7/1999	2200	High Wind	54	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/16/1999	1500	High Wind	50	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	5/5/1999	800	High Wind	59	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	10/31/1999	1730	High Wind	60	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/18/1999	956	High Wind	44	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/10/2000	800	High Wind	52	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/2/2000	700	High Wind	50	0	0	0	0

NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	4/5/2000	600	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/1/2000	730	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	1/25/2001	223	High Wind	69	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	5/1/2001	310	High Wind	64	0	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	12/1/2001	1620	High Wind	70	0	0	0	0	0
NORTHERN BLACK HILLS / LAWRENCE EXCEPT N / LAWRENCE EXCEPT SW MEADE (ZONE)	12/1/2001	1700	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/3/2001	412	High Wind	73	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/13/2002	600	High Wind	62	0	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	2/11/2002	1330	High Wind	59	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/23/2002	1432	High Wind	61	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	8/16/2002	1614	High Wind	50	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	8/16/2002	1630	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/29/2002	1528	High Wind	53	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/17/2003	1204	High Wind	63	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/13/2004	900	High Wind	54	0	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	5/31/2004	1100	High Wind	55	0	0	0	0	0

NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	12/11/2004	1800	High Wind		45	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/6/2005	1300	High Wind		37	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/10/2005	1000	High Wind		39	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	4/18/2006	0	High Wind		52	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	5/24/2006	800	High Wind		35	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	9/17/2006	1200	High Wind		35	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/19/2006	2000	High Wind		69	0	0	25000	0
NORTHERN FOOT HILLS (ZONE)	6/7/2007	800	High Wind		59	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/12/2007	1600	High Wind		76	0	0	50000	0
NORTHERN FOOT HILLS (ZONE)	11/14/2007	1200	High Wind		35	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/4/2008	1900	High Wind		52	0	0	25000	0
NORTHERN FOOT HILLS (ZONE)	1/4/2008	1900	High Wind		79	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/27/2008	200	High Wind		88	0	0	100000	0
NORTHERN BLACK HILLS (ZONE)	1/27/2008	1500	High Wind		52	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/26/2008	900	High Wind		52	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/14/2008	830	High Wind		35	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/29/2008	1900	High Wind		57	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/9/2009	900	High Wind		56	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/12/2009	200	High Wind		52	0	0	0	0

NORTHERN FOOT HILLS (ZONE)	5/13/2009	1230	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/1/2009	1200	High Wind	35	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/27/2010	1000	High Wind	35	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/18/2010	1200	High Wind	70	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/13/2011	1200	High Wind	51	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/16/2011	1900	High Wind	63	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/11/2011	0	High Wind	62	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/30/2011	1000	High Wind	53	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/7/2011	300	High Wind	57	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/26/2012	1630	High Wind	57	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/26/2012	1900	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	6/5/2012	2300	High Wind	73	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/2/2012	1100	High Wind	59	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/9/2013	2000	High Wind	62	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/11/2013	700	High Wind	53	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/11/2014	1600	High Wind	62	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/16/2014	0	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/24/2014	1200	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/26/2014	1100	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/16/2014	1600	High Wind	56	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/20/2014	700	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/18/2015	1000	High Wind	52	0	0	0	0	0

NORTHERN FOOT HILLS (ZONE)	2/7/2016	900	High Wind	51	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/7/2016	1100	High Wind	62	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/19/2016	1400	High Wind	50	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/5/2016	1300	High Wind	38	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/5/2016	2000	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/31/2016	430	High Wind	54	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/29/2017	300	High Wind	70	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/29/2017	300	High Wind	52	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/5/2017	1100	High Wind	50	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/25/2018	1300	High Wind	63	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/28/2019	900	High Wind	52	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/13/2020	1600	High Wind	62	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/13/2020	1600	High Wind	67	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/17/2020	2200	High Wind	51	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/13/2021	2200	High Wind	55	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/13/2021	2300	High Wind	55	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/22/2021	1300	High Wind	51	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/29/2021	300	High Wind	57	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/29/2021	300	High Wind	54	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/11/2021	1200	High Wind	50	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/14/2021	700	High Wind	58	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/14/2021	2100	High Wind	56	0	0	0	0	0

NORTHERN FOOT HILLS (ZONE)	12/15/2021	1400	High Wind	53	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/23/2021	2000	High Wind	52	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/30/2022	2230	High Wind	54	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/1/2022	1800	High Wind	65	0	0	0	0

Future Hazard Probability				
Event Type	Hail	Lightning*	Heavy Rain	Thunderstorm Winds
Probability	High	High	Med	High
Calculations Based Off Historical Data				
Number of days with historical events	266	6	3	74
Number of years with historical events	50	4	3	32
Years of recorded data	67 years (1956-2023)	25 years (1998-2023)	13 years (2010-2023)	66 years (1957-2023)
Possible number of days with event per year	3.97	0.24*	0.23	1.12
Probability of future events including climate variations	75%	16%*	23%	48%
Occurrence calculation	266/67 = 3.97	6/25 = 0.24	3/13 = 0.23	74/66 = 1.12
Probability calculation	50/67 = 0.75	4/25 = 0.16	3/13 = 0.23	32/66 = 0.48

Probability of future summer storm occurrence. Calculations based on NOAA weather data. *It is likely that lightning was unreported. Fire data shows that several fires were caused by lightning strikes, based on this information the probability is most likely 100%. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*.)

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	MAG	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
LAWRENCE CO.		8/6/1956	1930	Hail	2.5	0	0	0	0
LAWRENCE CO.		5/25/1958	1415	Hail	1.5	0	0	0	0
LAWRENCE CO.		7/2/1958	1615	Hail	2	0	0	0	0
LAWRENCE CO.		7/2/1958	1615	Hail	2	0	0	0	0
LAWRENCE CO.		7/10/1958	1400	Hail	2.75	0	0	0	0
LAWRENCE CO.		7/10/1958	1400	Hail	2.75	0	0	0	0
LAWRENCE CO.		7/3/1959	1610	Hail	1	0	0	0	0
LAWRENCE CO.		6/14/1962	1400	Hail	1.75	0	0	0	0
LAWRENCE CO.		6/19/1963	1900	Hail	1	0	0	0	0
LAWRENCE CO.		7/6/1963	1630	Hail	3	0	0	0	0
LAWRENCE CO.		7/23/1969	1622	Hail	1.75	0	0	0	0
LAWRENCE CO.		6/28/1971	2000	Hail	2.75	0	0	0	0
LAWRENCE CO.		5/18/1972	1400	Hail	1.75	0	0	0	0
LAWRENCE CO.		6/17/1972	1400	Hail	1.75	0	0	0	0
LAWRENCE CO.		8/10/1976	1300	Hail	1.5	0	0	0	0
LAWRENCE CO.		8/7/1979	1514	Hail	1.75	0	0	0	0
LAWRENCE CO.		8/7/1979	1745	Hail	1.75	0	0	0	0
LAWRENCE CO.		8/7/1979	1850	Hail	2.75	0	0	0	0
LAWRENCE CO.		6/14/1980	1545	Hail	1.75	0	0	0	0
LAWRENCE CO.		6/12/1981	1815	Hail	1.75	0	0	0	0
LAWRENCE CO.		6/12/1981	2115	Hail	1	0	0	0	0
LAWRENCE CO.		7/23/1981	2315	Hail	1.75	0	0	0	0
LAWRENCE CO.		7/31/1981	1920	Hail	2.75	0	0	0	0
LAWRENCE CO.		7/22/1982	1723	Hail	0.75	0	0	0	0
LAWRENCE CO.		8/23/1982	1951	Hail	2	0	0	0	0
LAWRENCE CO.		8/23/1982	2000	Hail	2.75	0	0	0	0
LAWRENCE CO.		6/18/1983	1640	Hail	1.75	0	0	0	0
LAWRENCE CO.		6/18/1983	1655	Hail	2.5	0	0	0	0
LAWRENCE CO.		6/18/1983	1705	Hail	0.75	0	0	0	0
LAWRENCE CO.		7/29/1983	1420	Hail	1	0	0	0	0
LAWRENCE CO.		8/4/1983	1200	Hail	1.75	0	0	0	0
LAWRENCE CO.		8/4/1983	1400	Hail	0.75	0	0	0	0
LAWRENCE CO.		6/16/1984	1440	Hail	1.75	0	0	0	0

LAWRENCE CO.		8/15/1985	1705	Hail		1.5	0	0	0	0
LAWRENCE CO.		6/30/1986	1340	Hail		1.5	0	0	0	0
LAWRENCE CO.		5/14/1991	1725	Hail		1.75	0	0	0	0
LAWRENCE CO.		5/14/1991	1915	Hail		1.75	0	0	0	0
LAWRENCE CO.		6/5/1991	1615	Hail		1	0	0	0	0
LAWRENCE CO.		6/5/1991	1700	Hail		1.75	0	0	0	0
LAWRENCE CO.		6/11/1992	1250	Hail		1	0	0	0	0
LAWRENCE CO.	Spearfish	5/21/1993	1715	Hail		0.75	0	0	0	0
LAWRENCE CO.	Lead	5/29/1993	1612	Hail		1.5	0	0	500	0
LAWRENCE CO.	Nemo	8/6/1993	1325	Hail		1.75	0	0	0	0
LAWRENCE CO.	Spearfish	8/13/1993	2030	Hail		1.75	0	0	0	0
LAWRENCE CO.	Spearfish	6/21/1995	1459	Hail		1.75	0	0	0	0
LAWRENCE CO.	Saint Onge	6/21/1995	1615	Hail		2.25	0	0	0	0
LAWRENCE CO.	Spearfish	7/23/1995	1520	Hail		1.75	0	0	0	0
LAWRENCE CO.	Sturgis	7/24/1995	1435	Hail		1.75	0	0	0	0
LAWRENCE CO.	NEMO	5/30/1996	1734	Hail		1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/18/1996	2349	Hail		1	0	0	0	0
LAWRENCE CO.	LEAD	8/9/1996	1415	Hail		1.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/9/1996	1415	Hail		0.75	0	0	0	0
LAWRENCE CO.	LEAD	8/9/1996	1505	Hail		0.75	0	0	0	0
LAWRENCE CO.	PLUMA	8/9/1996	1600	Hail		1	0	0	0	0
LAWRENCE CO.	SPEARFISH	9/2/1996	1101	Hail		0.75	0	0	0	0
LAWRENCE CO.	LEAD	9/2/1996	1118	Hail		0.75	0	0	0	0
LAWRENCE CO.	ROCHFORD	9/2/1996	1145	Hail		1.75	0	0	0	0
LAWRENCE CO.	ST ONGE	6/14/1997	1645	Hail		1	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/30/1997	2225	Hail		0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/12/1997	1433	Hail		1	0	0	0	0
LAWRENCE CO.	LEAD	7/24/1997	1425	Hail		1.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/26/1997	1342	Hail		1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/26/1998	1420	Hail		0.88	0	0	0	0
LAWRENCE CO.	ROUBAIX	7/1/1998	1405	Hail		1.75	0	0	0	0
LAWRENCE CO.	NEMO	7/1/1998	1415	Hail		1.5	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/8/1998	1040	Hail		1	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/23/1998	1320	Hail		1.25	0	0	0	0
LAWRENCE CO.	LEAD	5/26/1999	1347	Hail		1	0	0	0	0

LAWRENCE CO.	LEAD	6/7/1999	2012	Hail	2	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/7/1999	2015	Hail	1.5	0	0	0	0
LAWRENCE CO.	LEAD	6/9/1999	3	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/27/1999	1717	Hail	1.25	0	0	0	0
LAWRENCE CO.	LEAD	6/27/1999	1724	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/30/1999	1325	Hail	0.75	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	8/11/1999	1255	Hail	0.88	0	0	0	0
LAWRENCE CO.	LEAD	8/11/1999	1303	Hail	0.88	0	0	0	0
LAWRENCE CO.	NEMO	8/11/1999	1355	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/11/1999	2105	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/29/1999	1206	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/29/1999	1225	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/29/1999	1245	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	9/26/1999	1310	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/26/2000	1030	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/26/2000	1210	Hail	1	0	0	0	0
LAWRENCE CO.	LEAD	5/30/2000	25	Hail	0.75	0	0	0	0
LAWRENCE CO.	ST ONGE	6/22/2000	1835	Hail	1.75	0	0	0	0
LAWRENCE CO.	ST ONGE	6/23/2000	1835	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/5/2000	1440	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/5/2000	1456	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	7/5/2000	1605	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/10/2000	1327	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/10/2000	1407	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/10/2000	1450	Hail	0.75	0	0	0	0
LAWRENCE CO.	NEMO	7/10/2000	1520	Hail	1.5	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/1/2000	2131	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/8/2001	910	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/12/2001	935	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/12/2001	945	Hail	0.75	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/30/2001	1833	Hail	0.75	0	0	0	0
LAWRENCE CO.	NEMO	7/3/2001	1802	Hail	0.88	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/7/2001	1945	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/14/2001	1214	Hail	1	0	0	0	0

LAWRENCE CO.	SPEARFISH	7/22/2001	2100	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/22/2001	2122	Hail	0.75	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/23/2001	1700	Hail	1	0	0	0	0
LAWRENCE CO.	LEAD	7/23/2001	1710	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/26/2001	1601	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/8/2001	1615	Hail	1.75	0	0	0	0
LAWRENCE CO.	NEMO	8/20/2001	1546	Hail	0.88	0	0	0	0
LAWRENCE CO.	NEMO	8/20/2001	1645	Hail	0.75	0	0	0	0
LAWRENCE CO.	DUMONT	8/25/2001	1332	Hail	0.75	0	0	0	0
LAWRENCE CO.	LEAD	8/25/2001	1340	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/27/2002	1720	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/22/2002	1640	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/23/2002	2025	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/8/2002	1451	Hail	0.75	0	0	0	0
LAWRENCE CO.	LEAD	8/8/2002	1454	Hail	0.75	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/8/2002	1515	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/24/2002	1538	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/29/2002	1756	Hail	0.88	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/3/2003	1330	Hail	0.88	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/15/2003	1540	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/15/2003	1550	Hail	1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	5/26/2003	1220	Hail	1	0	0	0	0
LAWRENCE CO.	LEAD	5/26/2003	1240	Hail	0.88	0	0	0	0
LAWRENCE CO.	NEMO	6/9/2003	1145	Hail	0.75	0	0	0	0
LAWRENCE CO.	NEMO	6/12/2003	1129	Hail	0.75	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/13/2003	1255	Hail	0.88	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/15/2003	1435	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/15/2003	1752	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/15/2003	1752	Hail	0.88	0	0	0	0
LAWRENCE CO.	ONEILL PASS	6/16/2003	1425	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/21/2003	1533	Hail	1.25	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/21/2003	1547	Hail	1	0	0	1000000	0
LAWRENCE CO.	ST ONGE	6/21/2003	1600	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/4/2003	1322	Hail	0.75	0	0	0	0

LAWRENCE CO.	ST ONGE	7/4/2003	1350	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/4/2003	1350	Hail	0.75	0	0	0	0
LAWRENCE CO.	GALENA	7/4/2003	1415	Hail	0.75	0	0	0	0
LAWRENCE CO.	NEMO	7/5/2003	1125	Hail	0.88	0	0	0	0
LAWRENCE CO.	NEMO	7/5/2003	1140	Hail	1.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/5/2003	1227	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/5/2003	1229	Hail	1.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/5/2003	1229	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/5/2003	1300	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/17/2003	2020	Hail	0.75	0	0	0	0
LAWRENCE CO.	SAVOY	8/7/2003	1950	Hail	0.88	0	0	0	0
LAWRENCE CO.	CHEYENNE								
LAWRENCE CO.	CROSSING	7/29/2004	1540	Hail	0.75	0	0	0	0
LAWRENCE CO.	ST ONGE	8/7/2004	1500	Hail	0.75	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/7/2004	1515	Hail	0.75	0	0	0	0
LAWRENCE CO.	BROWNSVILLE	6/7/2005	1410	Hail	1.25	0	0	0	0
LAWRENCE CO.	BROWNSVILLE	6/7/2005	1415	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/20/2005	140	Hail	1	0	0	0	0
LAWRENCE CO.	BROWNSVILLE	7/5/2005	1325	Hail	1.5	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/7/2005	1415	Hail	0.75	0	0	0	0
LAWRENCE CO.	NEMO	7/21/2005	1558	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/24/2005	1820	Hail	0.75	0	0	0	0
LAWRENCE CO.	BROWNSVILLE	7/24/2005	1850	Hail	0.75	0	0	0	0
LAWRENCE CO.	BROWNSVILLE	7/30/2005	1555	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	8/23/2005	1810	Hail	1	0	0	0	0
LAWRENCE CO.	BROWNSVILLE	8/23/2005	1858	Hail	1.75	0	0	0	0
LAWRENCE CO.	LEAD	8/23/2005	1900	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	8/23/2005	1907	Hail	1.5	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/23/2005	2015	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/13/2006	1530	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/7/2006	1430	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	8/7/2006	1445	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/7/2006	1500	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/7/2006	1500	Hail	1.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/17/2006	1410	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/18/2007	2200	Hail	0.75	0	0	0	0

LAWRENCE CO.	SPEARFISH	5/21/2007	1430	Hail	1.25	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/21/2007	1440	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/28/2007	1414	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/28/2007	1640	Hail	1	0	0	0	0
LAWRENCE CO.	WHITEWOOD	5/28/2007	1705	Hail	1.25	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/28/2007	1735	Hail	2	0	0	2000	0
LAWRENCE CO.	SPEARFISH	6/16/2007	305	Hail	0.88	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/21/2007	1505	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/25/2007	2145	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	6/25/2007	2150	Hail	1.5	0	0	0	0
LAWRENCE CO.	NEMO	7/2/2007	1610	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/8/2007	1627	Hail	1.5	0	0	0	0
LAWRENCE CO.	ST ONGE	7/9/2007	1635	Hail	2.5	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/9/2007	1648	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/9/2007	1653	Hail	1	0	0	0	0
LAWRENCE CO.	WHITEWOOD	7/9/2007	1700	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/9/2007	1711	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/18/2007	1823	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	8/17/2007	1435	Hail	1.75	0	0	0	0
LAWRENCE CO.	GALENA	8/17/2007	1500	Hail	1.5	0	0	0	0
LAWRENCE CO.	GALENA	8/17/2007	1500	Hail	2.75	0	0	0	0
LAWRENCE CO.	GALENA	8/17/2007	1500	Hail	2.75	0	0	0	0
LAWRENCE CO.	NEMO	9/6/2007	1433	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/29/2008	1735	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/31/2008	1845	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/3/2008	10	Hail	1.75	0	0	0	0
LAWRENCE CO.	NEMO	6/20/2008	1345	Hail	1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/6/2008	1545	Hail	0.75	0	0	0	0
LAWRENCE CO.	ST ONGE	7/8/2008	1206	Hail	1	0	0	0	0
LAWRENCE CO.	WHITEWOOD	7/8/2008	1210	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/8/2008	1305	Hail	0.88	0	0	0	0
LAWRENCE CO.	LEAD	7/8/2008	1312	Hail	0.75	0	0	0	0
LAWRENCE CO.	NEMO	7/8/2008	1323	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/16/2008	2129	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/18/2008	1855	Hail	0.88	0	0	0	0

LAWRENCE CO.	GALENA	7/23/2008	1435	Hail	0.75	0	0	0	0
LAWRENCE CO.	NEMO	7/24/2008	1343	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	7/24/2008	1409	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/3/2008	2039	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	8/3/2008	2055	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/5/2008	1725	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/5/2008	1730	Hail	1.75	0	0	100000	0
LAWRENCE CO.	SPEARFISH	8/5/2008	1733	Hail	1.25	0	0	50000	0
LAWRENCE CO.	SPEARFISH	8/5/2008	1744	Hail	1.25	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/5/2008	1750	Hail	0.88	0	0	0	0
LAWRENCE CO.	LEAD	8/5/2008	1828	Hail	1.5	0	0	0	0
LAWRENCE CO.	LEAD	8/5/2008	1837	Hail	0.75	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	8/9/2008	1422	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/24/2008	1445	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	8/24/2008	1445	Hail	0.88	0	0	0	0
LAWRENCE CO.	ONEILL PASS	8/24/2008	1655	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/30/2009	1905	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	6/15/2009	1330	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	6/15/2009	1400	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/13/2009	1915	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/7/2009	1622	Hail	1.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/7/2009	1625	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/23/2010	2350	Hail	0.88	0	0	0	0
LAWRENCE CO.	LEAD	6/21/2010	1230	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	6/21/2010	1305	Hail	1.5	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/19/2010	105	Hail	1	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/26/2010	1526	Hail	1.75	0	0	20000	0
LAWRENCE CO.	GALENA	7/26/2010	1540	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/3/2010	1025	Hail	1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	8/3/2010	1045	Hail	1	0	0	0	0
LAWRENCE CO.	LEAD	8/3/2010	1100	Hail	1.75	0	0	300000	0
LAWRENCE CO.	CENTRAL CITY	8/3/2010	1103	Hail	1.75	0	0	100000	0
LAWRENCE CO.	DEADWOOD	8/3/2010	1115	Hail	1.25	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/3/2010	1120	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	6/13/2011	1847	Hail	1	0	0	0	0

LAWRENCE CO.	SPEARFISH	6/24/2011	1651	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/24/2011	1655	Hail	3	0	0	0	10000	0
LAWRENCE CO.	LEAD	6/24/2011	1715	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/24/2011	1720	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/24/2011	1720	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	NEMO	6/24/2011	1735	Hail	1	0	0	0	0	0
LAWRENCE CO.	WHITEWOOD	7/2/2011	1704	Hail	1	0	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/5/2011	1205	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/25/2011	1525	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	7/28/2011	1315	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	7/29/2011	1528	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	7/29/2011	1540	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/31/2011	1522	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/31/2011	1530	Hail	2	0	0	0	2000000	0
LAWRENCE CO.	SPEARFISH	7/31/2011	1530	Hail	1	0	0	0	0	0
LAWRENCE CO.	ST ONGE	7/31/2011	1535	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	NEMO	8/7/2011	1130	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	ST ONGE	8/7/2011	1530	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/11/2011	1430	Hail	1.75	0	0	0	30000	0
LAWRENCE CO.	DEADWOOD	8/14/2011	1233	Hail	1.25	0	0	0	25000	0
LAWRENCE CO.	NEMO	5/18/2012	1400	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	6/7/2012	1250	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/7/2012	1300	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	NEMO	6/7/2012	1357	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	ST ONGE	6/22/2012	2115	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/1/2012	1650	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/1/2012	1711	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	LEAD	7/17/2012	1223	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	LEAD	7/17/2012	1230	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	7/17/2012	1325	Hail	1	0	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	7/20/2012	1435	Hail	1	0	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	7/20/2012	1440	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	GALENA	7/21/2012	1310	Hail	1	0	0	0	0	0

LAWRENCE CO.	CHEYENNE CROSSING	7/21/2012	1630	Hail		1	0	0	0	0
LAWRENCE CO.	NEMO	7/21/2012	1640	Hail		1.75	0	0	0	5000
LAWRENCE CO.	NEMO	7/21/2012	1700	Hail		1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	8/2/2012	1645	Hail		1	0	0	0	0
LAWRENCE CO.	NEMO	8/2/2012	1715	Hail		1	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	8/10/2012	1300	Hail		0.88	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/10/2012	1300	Hail		1	0	0	0	0
LAWRENCE CO.	NEMO	8/10/2012	1420	Hail		1	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/11/2012	1530	Hail		0.75	0	0	0	0
LAWRENCE CO.	ST ONGE	5/17/2013	1330	Hail		0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/17/2013	1403	Hail		0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/17/2013	1410	Hail		1	0	0	0	0
LAWRENCE CO.	ST ONGE	5/17/2013	1420	Hail		1	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/17/2013	1526	Hail		1	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	5/17/2013	1527	Hail		1.25	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/17/2013	1530	Hail		1	0	0	0	0
LAWRENCE CO.	ST ONGE	5/17/2013	1538	Hail		1	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	5/17/2013	1541	Hail		1.75	0	0	0	5000
LAWRENCE CO.	DEADWOOD	5/17/2013	2058	Hail		1.75	0	0	0	1500000
LAWRENCE CO.	DEADWOOD	5/18/2013	1145	Hail		0.88	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/18/2013	1145	Hail		1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/18/2013	1215	Hail		0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	5/27/2013	1040	Hail		0.88	0	0	0	0
LAWRENCE CO.	ST ONGE	5/27/2013	1040	Hail		1	0	0	0	0
LAWRENCE CO.	ST ONGE	5/27/2013	1050	Hail		1	0	0	0	0
LAWRENCE CO.	WHITEWOOD	5/27/2013	1140	Hail		0.88	0	0	0	0
LAWRENCE CO.	WHITEWOOD	5/27/2013	1140	Hail		0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/11/2013	1917	Hail		1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/21/2013	1320	Hail		2	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/22/2013	1511	Hail		1.75	0	0	0	2000
LAWRENCE CO.	SPEARFISH	6/22/2013	1525	Hail		1.5	0	0	0	500000
LAWRENCE CO.	SPEARFISH	6/22/2013	1530	Hail		2	0	0	0	30000

LAWRENCE CO.	CENTRAL CITY	6/24/2013	1725	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	LEAD	7/8/2013	1525	Hail	1	0	0	0	0	0
LAWRENCE CO.	GALENA	7/8/2013	1525	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/19/2013	2045	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	CHEYENNE									
LAWRENCE CO.	CROSSING	8/7/2013	1550	Hail	1.5	0	0	0	2000	0
LAWRENCE CO.	CHEYENNE									
LAWRENCE CO.	CROSSING	8/9/2013	1446	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/10/2013	2115	Hail	1	0	0	0	0	0
LAWRENCE CO.	LEAD	8/11/2013	1325	Hail	1	0	0	0	0	0
LAWRENCE CO.	CHEYENNE									
LAWRENCE CO.	CROSSING	8/11/2013	1400	Hail	1	0	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/13/2013	1310	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	LEAD	8/13/2013	1315	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/13/2013	1424	Hail	1	0	0	0	0	0
LAWRENCE CO.	ST ONGE	8/13/2013	1445	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	ST ONGE	8/20/2013	1545	Hail	1	0	0	0	0	0
LAWRENCE CO.	LEAD	9/5/2013	1453	Hail	1	0	0	0	0	0
LAWRENCE CO.	LEAD	9/5/2013	1502	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	NEMO	9/8/2013	1430	Hail	1	0	0	0	0	0
LAWRENCE CO.	LEAD	9/25/2013	1645	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	LEAD	9/25/2013	1652	Hail	1.25	0	0	0	2000	0
LAWRENCE CO.	DEADWOOD	9/25/2013	1700	Hail	1	0	0	0	40000	0
LAWRENCE CO.	WHITEWOOD	9/25/2013	1718	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	WHITEWOOD	9/25/2013	1942	Hail	1.75	0	0	0	25000	0
LAWRENCE CO.	WHITEWOOD	9/25/2013	1947	Hail	1.25	0	0	0	5000	0
LAWRENCE CO.	DEADWOOD	5/22/2014	1418	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	NEMO	5/27/2014	1200	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	NEMO	5/27/2014	1213	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	ST ONGE	6/4/2014	1558	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	6/21/2014	1740	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	NEMO	6/21/2014	1830	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	NEMO	6/27/2014	1430	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	NEMO	8/5/2014	1655	Hail	1	0	0	0	0	0
LAWRENCE CO.	ST ONGE	6/19/2015	1925	Hail	4.5	0	0	0	10000	0
LAWRENCE CO.	ST ONGE	6/21/2015	2230	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/24/2015	1227	Hail	1	0	0	0	0	0

LAWRENCE CO.	SPEARFISH	6/24/2015	1230	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/24/2015	1230	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/24/2015	1230	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/24/2015	1230	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/24/2015	1230	Hail	0.75	0	0	0	0
LAWRENCE CO.	LEAD	6/29/2015	155	Hail	0.75	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/24/2015	1925	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	7/27/2015	1328	Hail	0.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/27/2015	1337	Hail	0.88	0	0	0	0
LAWRENCE CO.	GALENA	7/27/2015	1345	Hail	1.75	0	0	0	0
LAWRENCE CO.	WHITEWOOD	7/27/2015	1400	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	8/8/2015	1410	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	8/8/2015	1430	Hail	1.5	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/8/2015	1438	Hail	1	0	0	0	0
LAWRENCE CO.	LEAD	5/20/2016	1615	Hail	0.88	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/16/2016	1555	Hail	0.88	0	0	0	0
LAWRENCE CO.	NEMO	7/16/2016	1618	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	7/18/2016	1324	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	8/1/2016	1420	Hail	2.5	0	0	0	0
LAWRENCE CO.	NEMO	8/1/2016	1443	Hail	0.88	0	0	0	0
LAWRENCE CO.	NEMO	8/1/2016	1455	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	8/8/2016	1507	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/26/2016	1510	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/26/2016	1513	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	5/7/2017	1348	Hail	0.75	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/5/2017	1410	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	8/14/2017	1459	Hail	1.25	0	0	0	0
LAWRENCE CO.	NEMO	8/14/2017	1459	Hail	2	0	0	0	0
LAWRENCE CO.	NEMO	8/14/2017	1525	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	8/26/2017	1425	Hail	1	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/26/2017	1517	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	5/16/2018	1545	Hail	0.88	0	0	0	0

LAWRENCE CO.	ST ONGE	5/17/2018	1309	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	LEAD	6/7/2018	1550	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	GALENA	6/7/2018	1630	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	NEMO	6/7/2018	1642	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	6/7/2018	1655	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	6/8/2018	1315	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	6/8/2018	1333	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	GALENA	6/10/2018	1620	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/29/2018	1535	Hail	1	0	0	0	0	0
LAWRENCE CO.	LEAD	6/29/2018	1542	Hail	3	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/29/2018	1545	Hail	2	0	0	0	2000000	0
LAWRENCE CO.	WHITEWOOD	6/29/2018	1601	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/3/2018	1734	Hail	1	0	0	0	0	0
LAWRENCE CO.	GALENA	7/21/2018	1615	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	NEMO	7/21/2018	1633	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/27/2018	1525	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/27/2018	1528	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/27/2018	1530	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/27/2018	1531	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/27/2018	1534	Hail	1	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/27/2018	1605	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/29/2018	1340	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	WHITEWOOD	7/29/2018	1355	Hail	1	0	0	0	0	0
LAWRENCE CO.	GALENA	7/29/2018	1415	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	7/29/2018	1428	Hail	1	0	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	8/18/2018	1230	Hail	1	0	0	0	0	0
LAWRENCE CO.	GALENA	8/18/2018	1320	Hail	1	0	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/18/2018	1332	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	9/9/2018	1242	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	6/3/2019	1400	Hail	1	0	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/7/2019	1645	Hail	1	0	0	0	0	0
LAWRENCE CO.	LEAD	6/7/2019	1658	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	WHITEWOOD	6/7/2019	1710	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	6/14/2019	1300	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	NEMO	6/24/2019	1432	Hail	1	0	0	0	0	0

LAWRENCE CO.	NEMO	6/24/2019	1433	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	ST ONGE	7/2/2019	1650	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/5/2019	1430	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/5/2019	1441	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/5/2019	1447	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/5/2019	1459	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	ST ONGE	7/5/2019	1500	Hail	0.88	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	7/5/2019	1510	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	WHITEWOOD	7/5/2019	1524	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	LEAD	7/8/2019	1505	Hail	1	0	0	0	0	0
LAWRENCE CO.	NEMO	7/14/2019	1408	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/16/2019	1900	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/17/2019	1700	Hail	3	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/17/2019	1730	Hail	1	0	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	7/27/2019	1228	Hail	1	0	0	0	0	0
LAWRENCE CO.	LEAD	7/27/2019	1230	Hail	0.75	0	0	0	0	0
LAWRENCE CO.	LEAD	7/27/2019	1238	Hail	1	0	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	7/27/2019	1310	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/10/2019	1436	Hail	1	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/10/2019	1450	Hail	1	0	0	0	0	0
LAWRENCE CO.	GALENA	8/10/2019	1515	Hail	1	0	0	0	0	0
LAWRENCE CO.	CHEYENNE									
LAWRENCE CO.	CROSSING	8/14/2019	2125	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	CHEYENNE									
LAWRENCE CO.	CROSSING	8/14/2019	2145	Hail	1	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/17/2019	1005	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/17/2019	1006	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/17/2019	1009	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	8/17/2019	1025	Hail	1.75	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	9/29/2019	1845	Hail	1	0	0	0	0	0
LAWRENCE CO.	ST ONGE	9/29/2019	1856	Hail	1.25	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	9/29/2019	1926	Hail	1	0	0	0	0	0
LAWRENCE CO.	CHEYENNE									
LAWRENCE CO.	CROSSING	9/29/2019	1930	Hail	1	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	9/29/2019	1935	Hail	1.5	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	9/29/2019	2130	Hail	1	0	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/3/2020	1348	Hail	0.88	0	0	0	0	0

LAWRENCE CO.	DEADWOOD	5/3/2020	1350	Hail	1.25	0	0	0	0
LAWRENCE CO.	LEAD	5/20/2020	1740	Hail	0.88	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	5/20/2020	1744	Hail	0.88	0	0	0	0
LAWRENCE CO.	ONEILL PASS	5/23/2020	1254	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/4/2020	1638	Hail	2	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/4/2020	1639	Hail	2.5	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/4/2020	1647	Hail	2	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/4/2020	1654	Hail	1.25	0	0	0	0
LAWRENCE CO.	ST ONGE	6/4/2020	1659	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	6/28/2020	1650	Hail	2	0	0	0	0
LAWRENCE CO.	NEMO	6/28/2020	1703	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	6/29/2020	1525	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	6/29/2020	1555	Hail	1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/29/2020	1625	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	6/29/2020	1710	Hail	1	0	0	0	0
LAWRENCE CO.	GALENA	6/29/2020	1747	Hail	1.25	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/29/2020	1935	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/29/2020	1935	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/29/2020	1936	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/29/2020	1943	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/29/2020	1945	Hail	1.5	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/4/2020	1320	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	7/6/2020	1813	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/10/2020	1440	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/10/2020	1445	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/10/2020	1451	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	8/7/2020	1535	Hail	1.75	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/7/2021	1600	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/10/2021	1932	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/10/2021	1935	Hail	1.75	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/15/2021	350	Hail	0.88	0	0	0	0
LAWRENCE CO.	WHITEWOOD	6/19/2021	1635	Hail	1.75	0	0	0	0
LAWRENCE CO.	WHITEWOOD	6/19/2021	1640	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/24/2021	1340	Hail	0.75	0	0	0	0

LAWRENCE CO.	NEMO	7/3/2021	1146	Hail	1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	8/26/2021	1629	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	8/30/2021	1410	Hail	1	0	0	0	0
LAWRENCE CO.	LEAD	4/22/2022	1931	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/12/2022	1245	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/27/2022	1506	Hail	1.25	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/27/2022	1520	Hail	1.5	0	0	0	0
LAWRENCE CO.	LEAD	5/27/2022	1546	Hail	1.25	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/27/2022	1548	Hail	0.88	0	0	0	0
LAWRENCE CO.	ST ONGE	6/12/2022	1626	Hail	2.75	0	0	0	0
LAWRENCE CO.	WHITEWOOD	6/12/2022	1656	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/12/2022	1705	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/12/2022	1712	Hail	0.75	0	0	0	0
LAWRENCE CO.	LEAD	6/12/2022	1730	Hail	1.25	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/12/2022	1737	Hail	1.5	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/4/2022	1943	Hail	0.88	0	0	0	0
LAWRENCE CO.	NEMO	7/8/2022	1542	Hail	1.5	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/10/2022	2040	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	7/13/2022	1441	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/26/2023	1500	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/27/2023	1440	Hail	1	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/27/2023	1500	Hail	1.25	0	0	0	0
LAWRENCE CO.	NEMO	5/30/2023	1657	Hail	1	0	0	0	0
LAWRENCE CO.	ST ONGE	6/23/2023	1421	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/23/2023	1450	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/27/2023	1222	Hail	0.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/27/2023	1230	Hail	1.5	0	0	0	0
LAWRENCE CO.	ST ONGE	6/27/2023	1251	Hail	1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/27/2023	1515	Hail	0.88	0	0	0	0
LAWRENCE CO.	LEAD	6/27/2023	1526	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	7/3/2023	1634	Hail	1.75	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/11/2023	2009	Hail	0.88	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/11/2023	2014	Hail	1	0	0	0	0
LAWRENCE CO.	NEMO	8/12/2023	1255	Hail	1.25	0	0	0	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
LAWRENCE CO.	DEADWOOD	7/18/1998	2100	Lightning	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/23/1998	700	Lightning	0	0	0	0
LAWRENCE CO.	LEAD	7/27/2000	2030	Lightning	0	0	5000	0
LAWRENCE CO.	SPEARFISH	7/8/2001	1415	Lightning	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/15/2001	1100	Lightning	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/12/2015	1700	Lightning	1	1	0	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
LAWRENCE CO.	CHEYENNE CROSSING	10/9/2010	2100	Heavy Rain	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/25/2012	1500	Heavy Rain	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	8/13/2013	1400	Heavy Rain	0	0	0	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	MAG	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
LAWRENCE CO.		8/31/1957	2200	Thunderstorm Wind	0	0	0	0	0
LAWRENCE CO.		6/20/1960	1800	Thunderstorm Wind	0	0	0	0	0
LAWRENCE CO.		7/15/1969	2000	Thunderstorm Wind	0	0	0	0	0
LAWRENCE CO.		6/12/1981	1745	Thunderstorm Wind	60	0	0	0	0
LAWRENCE CO.		3/18/1982	1315	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.		9/6/1984	1645	Thunderstorm Wind	0	0	0	0	0
LAWRENCE CO.		6/30/1986	1315	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.		6/16/1989	2045	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.		7/10/1990	1850	Thunderstorm Wind	50	0	0	0	0
LAWRENCE CO.		7/10/1990	1915	Thunderstorm Wind	56	0	0	0	0
LAWRENCE CO.	Spearfish	6/9/1994	1315	Thunderstorm Wind	66	0	0	0	0
LAWRENCE CO.	Spearfish	7/6/1995	1921	Thunderstorm Wind	0	0	0	0	0
LAWRENCE CO.	Whitewood	7/18/1995	1717	Thunderstorm Wind	0	0	0	0	0
LAWRENCE CO.	Spearfish	7/24/1995	2100	Thunderstorm Wind	0	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/27/1999	1709	Thunderstorm Wind	70	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	6/27/1999	1724	Thunderstorm Wind	54	0	0	0	0
LAWRENCE CO.	NEMO	7/10/2000	1520	Thunderstorm Wind	69	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/1/2000	2125	Thunderstorm Wind	59	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/1/2000	2125	Thunderstorm Wind	68	0	0	0	0

LAWRENCE CO.	SPEARFISH	8/1/2000	2131	Thunderstorm Wind	95	0	6	9500000	0
LAWRENCE CO.	WHITEWOOD	3/12/2001	1545	Thunderstorm Wind	64	0	0	0	0
LAWRENCE CO.	DEADWOOD	5/1/2001	230	Thunderstorm Wind	60	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/30/2001	443	Thunderstorm Wind	58	0	0	0	0
LAWRENCE CO.	SPEARFISH	4/15/2002	2330	Thunderstorm Wind	52	0	0	5000	0
LAWRENCE CO.	LEAD	6/2/2002	1650	Thunderstorm Wind	64	0	0	1000	0
LAWRENCE CO.	SPEARFISH	7/16/2003	1750	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SAVOY	8/9/2003	2020	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	ST ONGE	7/2/2005	1820	Thunderstorm Wind	65	0	0	0	0
LAWRENCE CO.	WHITEWOOD	7/8/2008	1210	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/16/2008	2129	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/5/2008	1725	Thunderstorm Wind	56	0	0	1000	0
LAWRENCE CO.	SPEARFISH	8/5/2008	1744	Thunderstorm Wind	58	0	0	0	0
LAWRENCE CO.	ST ONGE	7/13/2009	1830	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/22/2010	1815	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/31/2011	1512	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	ST ONGE	7/31/2011	1535	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/4/2012	2350	Thunderstorm Wind	53	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	7/1/2012	1720	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/29/2012	1850	Thunderstorm Wind	50	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/2/2012	1526	Thunderstorm Wind	59	0	0	0	0
LAWRENCE CO.	ST ONGE	8/2/2012	1645	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	8/13/2012	2015	Thunderstorm Wind	51	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/11/2013	1930	Thunderstorm Wind	70	0	0	20000	0
LAWRENCE CO.	SPEARFISH ARPT	6/22/2013	1515	Thunderstorm Wind	51	0	0	0	0
LAWRENCE CO.	WHITEWOOD	8/10/2013	2115	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	ST ONGE	8/20/2013	1545	Thunderstorm Wind	54	0	0	0	0
LAWRENCE CO.	ST ONGE	6/4/2014	1555	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	ST ONGE	6/4/2014	1558	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/26/2014	1756	Thunderstorm Wind	69	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	6/26/2014	1835	Thunderstorm Wind	58	0	0	0	0
LAWRENCE CO.	ST ONGE	6/1/2015	2100	Thunderstorm Wind	56	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/17/2015	2030	Thunderstorm Wind	58	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/20/2015	1745	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	GALENA	6/20/2015	2230	Thunderstorm Wind	52	0	0	0	0

LAWRENCE CO.	SPEARFISH	6/21/2015	2230	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/29/2015	200	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	GALENA	7/27/2015	1335	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	NEMO	7/16/2016	1618	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	NEMO	7/16/2016	1620	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/30/2016	1746	Thunderstorm Wind	55	0	0	0	0
LAWRENCE CO.	ST ONGE	7/30/2016	1758	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	ST ONGE	8/2/2016	1720	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/26/2016	1525	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	9/14/2016	1815	Thunderstorm Wind	54	0	0	0	0
LAWRENCE CO.	SPEARFISH	4/17/2017	1928	Thunderstorm Wind	55	0	0	0	0
LAWRENCE CO.	SPEARFISH	4/17/2017	1935	Thunderstorm Wind	50	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/9/2018	1905	Thunderstorm Wind	51	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/9/2018	1919	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	NEMO	7/17/2018	1155	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/17/2018	1715	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/27/2018	1528	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/27/2018	1537	Thunderstorm Wind	51	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/27/2018	1538	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	WHITEWOOD	7/29/2018	1355	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	GALENA	7/29/2018	1410	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	ST ONGE	8/3/2018	1955	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	NEMO	9/9/2018	1237	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	ONEILL PASS	5/20/2020	1704	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	CENTRAL CITY	5/20/2020	1744	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/4/2020	1626	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	LEAD	6/4/2020	1655	Thunderstorm Wind	54	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/6/2020	1700	Thunderstorm Wind	52	0	1	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/6/2020	1710	Thunderstorm Wind	51	0	0	0	0
LAWRENCE CO.	LEAD	6/6/2020	1715	Thunderstorm Wind	58	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/6/2020	1715	Thunderstorm Wind	64	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/6/2020	1725	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/6/2020	1735	Thunderstorm Wind	63	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/10/2020	1445	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	ST ONGE	8/27/2020	1855	Thunderstorm Wind	61	0	0	0	0

LAWRENCE CO.	WHITEWOOD	8/27/2020	1900	Thunderstorm Wind	62	0	0	0	0
LAWRENCE CO.	WHITEWOOD	6/8/2021	1915	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	6/10/2021	1835	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/19/2021	1645	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	7/13/2021	2035	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	LEAD	7/13/2021	2050	Thunderstorm Wind	53	0	0	0	0
LAWRENCE CO.	ST ONGE	6/12/2022	1615	Thunderstorm Wind	79	0	0	0	0
LAWRENCE CO.	ST ONGE	6/12/2022	1626	Thunderstorm Wind	61	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/17/2022	2011	Thunderstorm Wind	52	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/17/2022	2015	Thunderstorm Wind	51	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	6/20/2022	1436	Thunderstorm Wind	51	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/10/2022	2051	Thunderstorm Wind	53	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/26/2022	1745	Thunderstorm Wind	70	0	0	0	0
LAWRENCE CO.	SPEARFISH	8/26/2022	1746	Thunderstorm Wind	54	0	0	0	0
LAWRENCE CO.	ST ONGE	8/26/2022	1804	Thunderstorm Wind	50	0	0	0	0
LAWRENCE CO.	ST ONGE	6/23/2023	1550	Thunderstorm Wind	52	0	0	0	0

Future Hazard Probability	
Event Type	Tornado
Probability	Med
Calculations Based Off Historical Data	
Number of days with historical events	20
Number of years with historical events	17
Years of recorded data	70 years (1953-2023)
Possible number of days with event per year	0.29
Probability of future events including climate variations	24%

Occurrence calculation	20/70 = 0.29
Probability calculation	17/70 = 0.24%

Probability of tornado occurrences. Calculations based on NOAA weather data. (NOAA: National Centers for Environmental Information. 2023. Storm Events Database).

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	SCALE	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
LAWRENCE CO.		8/4/1953	1855	Tornado	F1	0	0	250	0
LAWRENCE CO.		7/15/1954	2030	Tornado	F1	0	0	0	0
LAWRENCE CO.		6/14/1962	1400	Tornado	F1	0	0	25000	0
LAWRENCE CO.		6/3/1963	1030	Tornado		0	0	0	0
LAWRENCE CO.		7/12/1965	1840	Tornado	F3	0	0	250000	0
LAWRENCE CO.		6/20/1968	2000	Tornado	F2	0	0	0	0
LAWRENCE CO.		7/7/1969	2105	Tornado	F2	0	0	0	0
LAWRENCE CO.		7/23/1969	1630	Tornado	F2	0	0	250	0
LAWRENCE CO.		6/25/1975	1850	Tornado	F1	0	0	0	0
LAWRENCE CO.		8/7/1979	1745	Tornado	F0	0	0	0	0
LAWRENCE CO.		5/14/1991	1759	Tornado	F0	0	0	0	0
LAWRENCE CO.	to St. Onge	8/13/1993	2046	Tornado	F0	0	0	0	0
LAWRENCE CO.	DEADWOOD	6/22/1998	1849	Tornado	F0	0	0	0	0
LAWRENCE CO.	SPEARFISH	5/15/1999	1543	Tornado	F0	0	0	0	0
LAWRENCE CO.	SPEARFISH	6/27/1999	1730	Tornado	F1	0	0	0	0
LAWRENCE CO.	SPEARFISH ARPT	6/16/2007	1900	Tornado	EF1	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	8/8/2015	1350	Tornado	EF1	0	0	5000	0
LAWRENCE CO.	CHEYENNE CROSSING	6/29/2018	1520	Tornado	EF1	0	0	0	0
LAWRENCE CO.	ONEILL PASS	7/6/2020	1744	Tornado	EF2	0	0	0	0
LAWRENCE CO.	CHEYENNE CROSSING	7/10/2020	1435	Tornado	EF1	0	0	0	0

Future Hazard Probability	
Event Type	Wildfire
Probability	High

Probability of wildfire occurrences. Calculations based on Wildfire Interagency Fire Center data. (NOAA: National Centers for Environmental Information. 2023. *Storm Events Database*).

Incident Size	Fire Cause	Fire Cause General	Fire Discovery Date Time	Fire Out Date Time	Incident Name	Incident Type Category	POO County	POO Landowner Kind
			5/26/2014 18:47	5/29/2014 20:00	LONG DRAW	WF	Lawrence	Federal
			5/27/2014 22:13		YELLOW CREEK	WF	Lawrence	
			6/11/2014 22:46		HIDDEN	WF	Lawrence	Federal
			6/24/2014 16:09	6/24/2014 18:19	SPLIT ROCK	WF	Lawrence	Federal
			6/27/2014 2:46	6/27/2014 17:00	SPEARFISH CREEK	WF	Lawrence	Federal
			6/30/2014 17:11		MOLLMAN COUNTY ASSIST		WF	Lawrence
			7/12/2014 19:18	7/12/2014 19:30	BOGUS	WF	Lawrence	Federal
			7/23/2014 0:05		THUNDERSTRUCK	WF	Lawrence	
			8/2/2014 20:04	8/2/2014 20:10	TARGET	WF	Lawrence	Federal
Natural			8/6/2014 11:30	8/11/2014 21:30	SPRUCE GULCH	WF	Lawrence	Federal
			8/6/2014 22:03		I-90	WF	Lawrence	
			8/10/2014 17:55	8/10/2014 19:10	HIGGINS GULCH	WF	Lawrence	Federal
			8/30/2014 7:15	8/30/2014 14:45	MAZE	WF	Lawrence	Federal
Human			8/30/2014 23:49	8/31/2014 1:15	WILD BILL	WF	Lawrence	Federal
0.1	Natural		9/24/2014 22:38	9/25/2014 0:35	STEAMBOAT	WF	Lawrence	Federal
	Human		9/26/2014 20:57	9/26/2014 21:30	GATOR	WF	Lawrence	Federal
	Human		12/11/2014 22:00		PARAMOUNT CA	WF	Lawrence	
5.1	Human		2/12/2015 21:10		UPPER REDWATER CREEK		WF	Lawrence
			3/22/2015 23:15		MM 3	WF	Lawrence	
0.1	Natural		6/3/2015 13:59	6/3/2015 16:15	Rochford Ridge	WF	Lawrence	Federal
0.1	Natural		6/7/2015 16:32	6/8/2015 18:30	Dry Lake	WF	Lawrence	Federal
0.1	Human		6/22/2015 16:01	6/22/2015 17:40	Graham Cracker	WF	Lawrence	Federal
0.1	Human		7/26/2015 8:15	7/27/2015 21:17	Kelly	WF	Lawrence	Federal
0.1	Natural		7/27/2015 21:47	7/31/2015 17:50	Sandy	WF	Lawrence	
0.1	Human		8/1/2015 19:42	8/1/2015 21:02	Iron	WF	Lawrence	Federal
2.6	Human		8/5/2015 23:09	8/6/2015 14:40	DELZER CA	WF	Lawrence	

0.25	Natural		8/8/2015 22:58	8/19/2015 22:30	Bear Ridge	WF	Lawrence	
0.1	Human		8/9/2015 0:30	8/9/2015 2:15	DUMP	WF	Lawrence	Federal
1.37	Human		8/12/2015 14:31	8/17/2015 21:30	Jay	WF	Lawrence	Federal
0.1	Human		8/12/2015 17:46	8/12/2015 21:00	Strawberry	WF	Lawrence	Federal
0.1	Human		9/12/2015 18:20	9/13/2015 21:30	BALDY	WF	Lawrence	Federal
0.1	Human		9/27/2015 18:32	9/29/2015 17:00	Woodville	WF	Lawrence	
0.1	Human		10/15/2015 19:27	10/16/2015 14:22	Mile Marker 2	WF	Lawrence	
180	Human		12/1/2015 16:30		WEST RIM PB	RX	Lawrence	
10.5	Human		12/14/2015 22:18		Boulder Canyon Fuels PB		RX	Lawrence
2.25	Human		12/15/2015 21:55		Deadwood Fire Wise PB		RX	Lawrence
2610	Human		1/4/2016 18:54	5/20/2016 19:00	Telegraph West PB		RX	Lawrence
2540	Human		1/4/2016 19:07		Wave Ripple TS PB		RX	Lawrence
0.1	Human		1/13/2016 16:09	1/28/2016 20:09	Timber Gulch	WF	Lawrence	Federal
435	Human		1/19/2016 16:39	3/15/2016 13:10	Aspin T.S. PB	RX	Lawrence	
100	Human		1/22/2016 15:06	3/15/2016 13:10	Strike TS PB	RX	Lawrence	
0.1	Natural		2/14/2016 3:00	2/24/2016 21:12	Whistler	WF	Lawrence	Federal
1.3	Human		2/27/2016 19:00	3/3/2016 15:36	WATERFALL	WF	Lawrence	
0.1	Human		3/14/2016 2:45	3/14/2016 19:33	JC	WF	Lawrence	
5.6	Human		3/20/2016 22:36	3/23/2016 19:20	Paha Sapa	WF	Lawrence	
0.1	Human		5/5/2016 6:02	5/5/2016 14:39	Old Baldy	WF	Lawrence	Federal
0.1	Human		5/16/2016 18:36	5/24/2016 17:47	Fantail	WF	Lawrence	
4	Human		5/17/2016 19:35	5/23/2016 17:09	PARK	WF	Lawrence	Federal
0.1	Human		5/18/2016 18:29	5/18/2016 19:00	Tetrault	WF	Lawrence	
0.1	Natural		5/20/2016 21:43	5/21/2016 16:15	DUTCH	WF	Lawrence	Federal
0.33	Natural		5/22/2016 18:47	5/26/2016 17:41	McKee	WF	Lawrence	Federal
0.1	Human		5/28/2016 21:17	5/28/2016 22:20	WAITE	WF	Lawrence	Federal
0.1	Human		6/7/2016 19:35	6/7/2016 20:50	Camp 5	WF	Lawrence	Federal
0.4	Natural		6/10/2016 0:45	6/12/2016 21:50	EXIT 17 CA	WF	Lawrence	
0.6	Natural		6/10/2016 0:45	6/15/2016 18:27	SPEARFISH MTN	WF	Lawrence	Federal
0.25	Natural		6/10/2016 1:04	6/12/2016 22:06	KERWIN	WF	Lawrence	
0.1	Natural		6/14/2016 14:15	6/21/2016 20:15	CROW CREEK	WF	Lawrence	
1.3	Human		6/21/2016 20:09	6/23/2016 18:26	MATTSON	WF	Lawrence	
0.1	Natural		6/21/2016 22:16	6/26/2016 17:54	ASTER	WF	Lawrence	
2734	Natural		6/25/2016 0:16	9/9/2016 15:00	Crow Peak	WF	Lawrence	Federal
0.63	Human		7/3/2016 15:38	7/6/2016 19:50	Hideaway	WF	Lawrence	Federal

0.25	Natural		7/7/2016 0:58	7/12/2016 21:15	Seventy	WF	Lawrence	
0.1	Human		7/9/2016 12:18	7/10/2016 23:45	BOULDER CREEK	WF	Lawrence	
0.1	Natural		7/9/2016 23:05	7/11/2016 0:40	WHITEWOOD PEAK		WF	Lawrence
1.2	Human		7/11/2016 15:15	7/20/2016 22:33	Annie	WF	Lawrence	Federal
0.1	Natural		7/15/2016 17:35	7/19/2016 18:22	LIMESTONE	WF	Lawrence	Federal
0.25	Natural		7/16/2016 12:50	7/19/2016 20:14	TIMBER	WF	Lawrence	Federal
0.1	Natural		7/17/2016 1:20	7/17/2016 17:47	SAWMILL	WF	Lawrence	
0.2	Human		7/17/2016 17:57	7/20/2016 19:50	RED HILL	WF	Lawrence	
0.1	Human		7/21/2016 19:47	7/21/2016 20:27	14A	WF	Lawrence	
2.4	Natural		7/22/2016 18:56	7/22/2016 19:50	GOLF COURSE CA	WF	Lawrence	
0.1	Natural		7/22/2016 21:48	7/31/2016 16:30	CREEK CA	WF	Lawrence	
0.1	Natural		8/1/2016 18:12	8/2/2016 18:40	Tickelgrass	WF	Lawrence	Federal
0.1	Natural		8/3/2016 1:47	8/3/2016 17:17	GREEN MOUNTAIN		WF	Lawrence
0.6	Natural		8/4/2016 19:40	8/9/2016 17:13	FORK	WF	Lawrence	Federal
0.1	Human		8/5/2016 15:56	8/7/2016 18:13	MM24	WF	Lawrence	
0.1	Human		8/7/2016 19:55	8/7/2016 20:30	BEAR BUTTE CREEK		WF	Lawrence
0.1	Natural		8/8/2016 4:00	8/8/2016 4:30	Acorn	WF	Lawrence	
0.1	Natural		8/8/2016 21:43	8/10/2016 17:35	Roubaix	WF	Lawrence	Federal
1.22	Natural		8/9/2016 20:37	8/14/2016 18:00	HIGGINS	WF	Lawrence	Federal
0.1	Natural		8/9/2016 21:50	8/12/2016 17:36	DEAD HORSE	WF	Lawrence	Federal
0.1	Natural		8/10/2016 21:58	8/11/2016 0:11	PASQUE	WF	Lawrence	Federal
0.1	Natural		8/10/2016 23:38	8/12/2016 19:30	176A	WF	Lawrence	Federal
0.1	Human		8/14/2016 19:31	8/14/2016 20:16	Benchmark	WF	Lawrence	Federal
0.1	Human		8/15/2016 17:07	8/15/2016 17:37	MM18	WF	Lawrence	
1.7	Human		8/16/2016 18:43	8/22/2016 19:00	SERENITY	WF	Lawrence	
0.1	Natural		8/18/2016 2:26	8/18/2016 16:49	PILLER	WF	Lawrence	Federal
0.28	Natural		8/23/2016 12:00	8/27/2016 19:30	Raddick	WF	Lawrence	Federal
0.1	Natural		9/5/2016 18:45	9/10/2016 17:09	Big Spring	WF	Lawrence	Federal
0.1	Natural		9/6/2016 1:16	9/10/2016 17:26	Deer Spring	WF	Lawrence	
1.04	Human		10/8/2016 18:35	10/13/2016 16:40	EAST GIMLET	WF	Lawrence	Federal
30	Human		10/21/2016 21:52	11/30/2016 15:00	Work Center RX	RX	Lawrence	
0.1	Human		10/24/2016 19:55	10/26/2016 17:15	WHITEWOOD HALL		WF	Lawrence
	Human		10/26/2016 15:50	11/30/2016 15:00	RIFLE PIT RX	RX	Lawrence	
0.1	Human		3/4/2017 18:18	3/8/2017 16:51	OAK	WF	Lawrence	
0.1	Human		4/7/2017 18:17	4/10/2017 20:20	Aspen Hollow	WF	Lawrence	

0.1	Human		4/8/2017 0:25	4/10/2017 21:00	Ponderosa	WF	Lawrence	
0.1	Human		4/18/2017 17:49	4/18/2017 20:15	Pond	WF	Lawrence	Federal
1.4	Human		5/6/2017 19:40	5/11/2017 18:37	Anchor	WF	Lawrence	
0.1	Human		6/12/2017 22:20	6/12/2017 23:36	Steamboat	WF	Lawrence	Federal
0.75	Natural		6/23/2017 1:41	6/27/2017 20:12	Boulder Creek	WF	Lawrence	Federal
0.2	Natural		7/5/2017 19:33	7/9/2017 19:00	Dalton	WF	Lawrence	Federal
0.1	Human		7/5/2017 23:50	7/6/2017 0:54	Old Baldy	WF	Lawrence	Federal
0.1	Natural		7/10/2017 20:41	7/17/2017 18:25	Kirk	WF	Lawrence	Federal
0.2	Natural		7/12/2017 19:40	7/16/2017 16:50	Whitewood Hill	WF	Lawrence	
0.1	Natural		7/16/2017 21:07	7/18/2017 19:05	Big Mud	WF	Lawrence	Federal
0.1	Natural		7/21/2017 6:13	7/25/2017 14:43	Eden	WF	Lawrence	
1.2	Natural		7/22/2017 17:00	7/30/2017 16:30	Crow	WF	Lawrence	
1.5	Natural		7/24/2017 16:58	7/29/2017 18:10	Griggs	WF	Lawrence	Federal
1	Natural		7/24/2017 21:19	7/29/2017 22:00	Burno	WF	Lawrence	Federal
0.1	Natural		8/2/2017 4:08	8/5/2017 16:15	VALKYRIE	WF	Lawrence	
0.44	Natural		8/25/2017 4:59	8/25/2017 19:00	Datum Creek	WF	Lawrence	
0.1	Natural		8/26/2017 0:43	8/26/2017 1:35	Shepard	WF	Lawrence	
0.2	Natural		9/13/2017 18:03	9/18/2017 17:15	Wildcat	WF	Lawrence	
0.1	Human		11/8/2017 18:02	11/8/2017 18:50	MM 25	WF	Lawrence	
8.97	Human		1/26/2018 2:46	1/30/2018 22:00	Spruce Gulch	WF	Lawrence	
0.1	Natural		5/17/2018 23:35	5/18/2018 0:30	Reausaw Lake	WF	Lawrence	
0.1	Human		5/27/2018 16:05	5/27/2018 16:20	Orange	WF	Lawrence	Federal
0.1	Human		6/3/2018 14:07	6/3/2018 14:43	Big Hill	WF	Lawrence	Federal
0.1	Human		7/22/2018 14:20	7/22/2018 17:20	Moonlight Ridge	WF	Lawrence	Federal
0.1	Human		8/29/2018 17:08	8/29/2018 17:45	HAY FIELD	WF	Lawrence	
0.3	Unknown		9/12/2018 11:38	9/13/2018 20:00	Lookout	WF	Lawrence	
1	Human		1/4/2019 15:19		Boulder Canyon PB		RX	Lawrence
86.5	Human		1/7/2019 15:09	4/2/2019 19:30	Deadwood Firewise PB		RX	Lawrence
710	Human		1/29/2019 17:00	4/3/2019 15:00	Neptune PB	RX	Lawrence	
4	Human		2/3/2019 15:35	12/17/2019 17:00	Gimlet PB	RX	Lawrence	
2020	Human		2/7/2019 23:00	4/3/2019 15:00	Battle PB	RX	Lawrence	
0.88	Human		4/7/2019 19:39	4/12/2019 19:15	Cody Lane	WF	Lawrence	
0.1	Natural		6/4/2019 15:26	6/10/2019 18:20	Red Lake	WF	Lawrence	Federal
0.1	Natural		6/16/2019 16:00	6/21/2019 18:30	Whistler Gulch	WF	Lawrence	
0.1	Human		6/19/2019 22:13	6/19/2019 23:30	Roubaix	WF	Lawrence	Federal

0.1	Human		6/28/2019 21:56	7/2/2019 20:30	Tomahawk	WF	Lawrence	
0.1	Human		7/21/2019 15:22	7/22/2019 21:00	Iron Creek	WF	Lawrence	
0.1	Human		9/1/2019 19:26	9/5/2019 17:00	Exit 8	WF	Lawrence	
0.1	Human		9/5/2019 17:35	9/5/2019 19:50	Butcher	WF	Lawrence	Federal
0.1	Human		9/7/2019 16:40	9/11/2019 21:20	Sheeptail Gulch	WF	Lawrence	Federal
0.1	Human		9/9/2019 15:10	9/9/2019 16:35	Lost	WF	Lawrence	Federal
0.1	Human		9/9/2019 20:04	9/12/2019 18:10	Badger	WF	Lawrence	
0.1	Human		9/28/2019 18:02	9/30/2019 17:30	High Ridge	WF	Lawrence	
36	Human		10/10/2019 14:19		Sugarloaf PB	RX	Lawrence	
0.1	Unknown		10/23/2019 16:17		Jim Creek RX	RX	Lawrence	Federal
10	Human		10/29/2019 15:19	12/17/2019 17:00	Elk Creek PB	RX	Lawrence	
	Human		10/31/2019 15:24		Work Center PB	RX	Lawrence	
6	Human		11/1/2019 18:34	12/17/2019 18:50	Terry Peak PB	RX	Lawrence	
200	Human		11/1/2019 18:52	12/17/2019 17:00	Super Timber Sale PB		RX	Lawrence
29.72	Human		1/2/2020 15:35	4/8/2020 18:00	Boulder Canyon PB		RX	Lawrence
1	Human		1/7/2020 16:52	4/8/2020 18:00	Zone 4 PB	RX	Lawrence	
1	Human		1/14/2020 15:48	4/9/2020 19:00	Deadwood Fuels PB		RX	Lawrence
10	Human		1/15/2020 22:56	4/9/2020 19:00	Nemo Bone Yard PB		RX	Lawrence
2	Human		1/24/2020 15:50	4/9/2020 19:00	Silver Arrow PB	RX	Lawrence	
8	Human		2/11/2020 20:48	2/19/2020 19:25	Jenny PB	RX	Lawrence	
0.25	Human		2/22/2020 17:44	3/6/2020 18:57	Whitewood Fuels PB		RX	Lawrence
0.1	Human	Other Human Cause	3/7/2020 21:45	3/11/2020 17:45	MM 23	WF	Lawrence	Other
0.26	Human	Debris/Open Burning	4/28/2020 21:38	5/1/2020 21:00	Crackerjack CA	WF	Lawrence	Private
0.4	Natural	Lightning	6/1/2020 1:37	6/3/2020 22:06	Homestake	WF	Lawrence	Private
0.1	Human	Camping	6/11/2020 14:04	6/14/2020 17:00	Game Farm	WF	Lawrence	Other
0.1	Human	Smoking	6/13/2020 16:18	6/16/2020 19:15	American Eagle	WF	Lawrence	Private
0.1	Human	Debris/Open Burning	6/13/2020 20:28	6/18/2020 17:30	Frontier Loop	WF	Lawrence	Private
0.1	Human	Camping	6/18/2020 20:08	6/18/2020 22:00	Keough Draw	WF	Lawrence	Federal
0.1	Human	Equipment	7/3/2020 20:13	7/4/2020 20:00	Red Hill	WF	Lawrence	Federal
0.1	Natural	Lightning	7/8/2020 2:07	7/8/2020 21:50	Wildcat	WF	Lawrence	Federal
0.1	Human	Debris/Open Burning	7/26/2020 18:39	8/1/2020 16:32	Hann	WF	Lawrence	Private
0.1	Natural	Lightning	7/31/2020 15:56	8/5/2020 17:31	Wild Turkey	WF	Lawrence	Private
0.1	Natural	Lightning	8/8/2020 5:30	8/8/2020 14:30	Archery	WF	Lawrence	Federal
0.42	Natural	Lightning	8/8/2020 19:40	8/12/2020 22:39	ONeil	WF	Lawrence	Private
0.1	Natural	Lightning	8/9/2020 0:08	8/10/2020 23:00	200TH CA	WF	Lawrence	Private

0.1	Human	Camping	8/27/2020 18:14	8/27/2020 19:10	Slaughter House	WF	Lawrence	Federal
0.31	Natural	Lightning	8/27/2020 22:49	8/31/2020 20:12	Wilson	WF	Lawrence	Federal
0.1	Human	Debris/Open Burning	8/28/2020 23:13	8/29/2020 0:15	Green Mountain	WF	Lawrence	Private
0.1	Natural	Lightning	8/29/2020 22:25	9/2/2020 17:17	Richmond Hill	WF	Lawrence	Private
580	Human		11/3/2020 18:35		Beartown RX	RX	Lawrence	
0.1	Human	Camping	11/13/2020 19:41	11/13/2020 21:00	Texas	WF	Lawrence	Federal
43.9	Human	Utilities	11/14/2020 2:47	12/2/2020 21:18	Two Bit Springs	WF	Lawrence	Private
0.28	Human	Debris/Open Burning	11/18/2020 9:29	11/23/2020 19:00	Warren Loop	WF	Lawrence	Private
99	Human		1/4/2021 15:24		Sugarloaf PB	RX	Lawrence	Federal
700	Human		1/4/2021 21:03		Slapshot TS PB	RX	Lawrence	
40	Human		1/4/2021 21:11		Powerpole PB	RX	Lawrence	
70	Human		1/4/2021 21:17	12/1/2021 18:57	Deadwood Fuels PB		RX	Lawrence
1340	Human		1/8/2021 20:46		Turkey Tail PB	RX	Lawrence	
1060	Human		1/13/2021 0:46		Defender TS PB	RX	Lawrence	
1.06	Human	Debris/Open Burning	1/14/2021 0:58	1/27/2021 21:00	Datum Creek	WF	Lawrence	Private
80	Human		1/19/2021 19:28		Polo TS PB	RX	Lawrence	
5	Human		1/20/2021 22:57		Toad 29 PB	RX	Lawrence	
61	Human		1/25/2021 15:54		Kirk PB	RX	Lawrence	
1200	Human		1/25/2021 15:58		Super PB	RX	Lawrence	
38	Human		1/26/2021 15:04	3/12/2021 16:24	Gilded Mountain PB		RX	Lawrence
89	Human		1/26/2021 22:15		Mineral PB	RX	Lawrence	
0.19	Human	Debris/Open Burning	1/29/2021 16:58	1/29/2021 18:47	Apple	WF	Lawrence	Private
190	Human		2/2/2021 22:14		Pint TS PB	RX	Lawrence	
1	Human		2/2/2021 22:17		Elk Hay PB	RX	Lawrence	
320	Human		2/8/2021 16:32		Viper PB	RX	Lawrence	
420	Human		2/8/2021 16:32		Boilermaker PB	RX	Lawrence	
260	Human		2/8/2021 16:32		Frogger PB	RX	Lawrence	
50	Human		2/8/2021 18:38		Meadow PB	RX	Lawrence	
9.5	Human		2/9/2021 14:55	2/26/2021 16:35	Boulder Canyon PB		RX	Lawrence
1	Human		2/10/2021 16:26		Pony PB	RX	Lawrence	
7	Human		2/17/2021 17:12		Duran PB	RX	Lawrence	
240	Human		2/17/2021 17:44		Pony Keg PB	RX	Lawrence	
0.26	Human	Debris/Open Burning	2/23/2021 14:43	2/25/2021 17:00	Talon	WF	Lawrence	Private
2.6	Human	Debris/Open Burning	2/26/2021 21:04	3/9/2021 18:00	White Gate	WF	Lawrence	Federal
0.1	Human	Equipment	5/17/2021 19:09	5/18/2021 18:52	Butte Creek	WF	Lawrence	Private

0.1	Natural	Lightning	5/28/2021 12:24	6/1/2021 17:15	Cabin	WF	Lawrence	Federal
0.1	Natural	Lightning	6/1/2021 12:28	6/4/2021 15:25	14 A	WF	Lawrence	Federal
0.1	Human	Equipment	6/4/2021 19:47	6/4/2021 20:40	Mile Marker 22	WF	Lawrence	Other
0.1	Human	Equipment	6/4/2021 20:54	6/4/2021 21:02	18	WF	Lawrence	Private
0.1	Human	Equipment	6/5/2021 16:36	6/5/2021 17:06	Rest Area	WF	Lawrence	Other
0.1	Human	Other Human Cause	6/9/2021 17:59	6/15/2021 16:00	Camp Comfort CA	WF	Lawrence	Private
0.1	Human	Other Human Cause	6/11/2021 1:00	6/15/2021 17:30	Birch	WF	Lawrence	Private
0.1	Human	Equipment	6/17/2021 19:34	6/17/2021 20:43	7 Downs	WF	Lawrence	Private
0.2	Natural	Lightning	6/24/2021 3:47	7/1/2021 22:04	Higgins	WF	Lawrence	Other
0.1	Natural	Lightning	6/24/2021 20:32		Desperado	WF	Lawrence	Private
0.1	Natural	Lightning	6/24/2021 22:09	6/28/2021 17:44	Crow Creek	WF	Lawrence	Federal
0.13	Undetermined	Other Human Cause	7/2/2021 0:09	7/6/2021 16:17	Dalton	WF	Lawrence	Federal
0.1	Natural	Lightning	7/8/2021 3:00	7/8/2021 16:00	Benchmark	WF	Lawrence	Private
0.1	Natural	Lightning	7/8/2021 11:49	7/10/2021 16:20	False Bottom	WF	Lawrence	Private
0.1	Natural	Lightning	7/10/2021 2:48	7/11/2021 20:23	Sunset Ranch	WF	Lawrence	Private
0.1	Natural	Lightning	7/10/2021 14:45	7/14/2021 15:18	Citadal	WF	Lawrence	Federal
1	Human	Other Human Cause	7/13/2021 16:21	7/26/2021 20:00	Meier CA	WF	Lawrence	Private
0.1	Human	Equipment	7/21/2021 22:11	7/22/2021 21:00	Swather	WF	Lawrence	Private
0.1	Natural	Lightning	7/22/2021 22:34	7/28/2021 17:15	Oliver	WF	Lawrence	Private
0.1	Natural	Lightning	7/23/2021 2:07	7/25/2021 17:06	Pony	WF	Lawrence	Federal
23	Human	Equipment	7/26/2021 22:01	8/6/2021 15:10	Upper Mirror	WF	Lawrence	Other
0.39	Natural	Lightning	8/1/2021 22:00	8/3/2021 22:30	Silver Creek	WF	Lawrence	Federal
0.1	Natural	Lightning	8/7/2021 0:39	8/7/2021 16:40	Stage Run	WF	Lawrence	Federal
80	Human	Utilities	8/11/2021 20:42	9/7/2021 0:45	Kirk Hill	WF	Lawrence	Federal
2.5	Human	Equipment	8/13/2021 16:30	8/18/2021 17:00	Crook City	WF	Lawrence	Private
5.77	Undetermined	Undetermined	8/14/2021 16:27	8/16/2021 19:00	Avalanche	WF	Lawrence	Private
0.1	Human	Camping	8/14/2021 18:02	8/14/2021 19:15	Ball Park	WF	Lawrence	Federal
0.1	Natural	Lightning	9/13/2021 20:51	9/14/2021 18:05	Rochford Ridge	WF	Lawrence	Federal
0.34	Natural	Lightning	9/16/2021 20:18	9/22/2021 18:34	Roubaix	WF	Lawrence	Federal
0.1	Human	Camping	9/25/2021 17:25	9/25/2021 17:35	Hannah	WF	Lawrence	Federal
10	Human		10/19/2021 15:39		Vortex TS PB	RX	Lawrence	Federal
0.2	Human	Camping	11/21/2021 23:20	11/24/2021 19:45	White Mansion	WF	Lawrence	Federal
10	Human		1/3/2022 18:14	4/20/2022 18:16	Spearfish WC Bone Pile	RX	RX	Lawrence
1240	Human		1/4/2022 14:48	4/20/2022 18:16	Wizard TS PB		RX	Federal
1140	Human		1/4/2022 14:52	4/20/2022 18:16	Vortex TS PB	RX	Lawrence	Federal

112	Human		1/6/2022 17:12	1/31/2022 23:00	Sugarloaf PB	RX	Lawrence	Federal
0.19	Human	Debris/Open Burning	1/9/2022 23:56	1/12/2022 18:45	Warren	WF	Lawrence	Private
75	Human		1/25/2022 19:40	4/20/2022 18:16	Spearfish Canyon PB		RX	Lawrence
1380	Human		1/31/2022 17:23	4/20/2022 18:16	Goose TS PB	RX	Lawrence	Private
1410	Human		2/9/2022 23:17	4/20/2022 18:16	Ghost rider PB	RX	Lawrence	Federal
140	Human		2/9/2022 23:22	4/20/2022 18:16	Chain PB	RX	Lawrence	Federal
2.3	Human	Debris/Open Burning	2/20/2022 18:50	3/15/2022 18:00	Stampede CA	WF	Lawrence	Private
2	Human		3/7/2022 22:25	3/31/2022 17:02	Deadwood Fuels PB		RX	Lawrence
2.07	Human		3/27/2022 21:39	5/12/2022 20:15	Minnesota	WF	Lawrence	Federal
0.14	Human		5/2/2022 20:32	5/3/2022 18:00	Mile Marker 1	WF	Lawrence	Private
0.1	Human		6/2/2022 18:28	6/10/2022 18:30	Elk	WF	Lawrence	Federal
0.48	Human		7/7/2022 21:10		Chicken Creek	WF	Lawrence	Private
0.1	Human		7/13/2022 3:10	7/13/2022 5:15	Timbers	WF	Lawrence	Federal
2.6	Human		7/29/2022 22:39	8/4/2022 23:00	Hardin	WF	Lawrence	Private
0.1	Human		7/30/2022 15:35	8/4/2022 17:43	Pendo Road	WF	Lawrence	Private
1.8	Human		8/3/2022 17:03	8/10/2022 18:21	Wagon	WF	Lawrence	Federal
0.1	Human		8/7/2022 18:11	8/7/2022 18:40	Bogus Jim	WF	Lawrence	Federal
1	Natural		8/7/2022 22:45		Rubble	WF	Lawrence	Private
0.1	Natural		8/8/2022 1:18	8/10/2022 19:11	Little Spearfish	WF	Lawrence	Federal
0.1	Human		8/9/2022 20:37	8/11/2022 20:00	Adventure	WF	Lawrence	Federal
0.37	Natural		8/17/2022 22:15	8/24/2022 17:24	Redpath	WF	Lawrence	Private
0.1	Natural		8/18/2022 0:18	8/19/2022 18:30	Dry Gulch	WF	Lawrence	Federal
0.25	Natural		8/18/2022 0:20	8/24/2022 18:00	Labrador	WF	Lawrence	Federal
0.1	Natural		8/18/2022 15:53	8/22/2022 17:00	Sheeptail	WF	Lawrence	Federal
0.1	Natural		8/18/2022 18:36	8/23/2022 18:38	Boxelder	WF	Lawrence	Private
0.1	Natural		8/18/2022 22:24	8/19/2022 19:15		228	Lawrence	Federal
1	Undetermined		8/30/2022 22:20		HWY 85	WF	Lawrence	Private
	Human		9/1/2022 23:32	9/4/2022 17:44	Kirk Road	WF	Lawrence	Private
0.1	Human		9/5/2022 20:31	9/5/2022 21:11	Polo Creek	WF	Lawrence	Private
0.1	Human		9/13/2022 14:27	9/14/2022 17:00	Exit 8	WF	Lawrence	Private
0.1	Natural		9/17/2022 0:06	9/17/2022 0:54	Miners	WF	Lawrence	Private
0.1	Natural		9/19/2022 1:28	9/20/2022 17:20	Aspen Hills	WF	Lawrence	Federal
465	Human		9/23/2022 14:26		Ruby Flats RX	RX	Lawrence	Federal
3.5	Undetermined		9/24/2022 22:36		Pit	WF	Lawrence	Private
28.7	Undetermined		9/26/2022 20:01		Eden	WF	Lawrence	Private

0.14	Human		10/10/2022 18:53	10/14/2022 19:15	Nemo Ridge	WF	Lawrence	Federal
0.1	Human		10/13/2022 20:09	10/14/2022 16:35	Wildcat Gulch	WF	Lawrence	Federal
1	Human		11/7/2022 22:01		Gilt Edge PB	RX	Lawrence	Private
0.2	Human		12/1/2022 21:14	12/1/2022 22:00	Yellow Creek	WF	Lawrence	Private
0.23	Human		12/9/2022 20:55		Slag Pile	WF	Lawrence	Private
1	Human		1/3/2023 16:01		Englewood Units RX		RX	Lawrence
148	Human		1/3/2023 20:06	3/3/2023 19:34	Spearfish Canyon RX		RX	Lawrence
3000	Human		1/4/2023 22:04	3/14/2023 17:01	Pantheon RX	RX	Lawrence	Federal
5	Human		1/9/2023 21:10		Englewood RX	RX	Lawrence	Private
1	Undetermined		1/9/2023 21:10		Strike RX	RX	Lawrence	Federal
5	Human		1/11/2023 17:45		Strawberry Hill RX	RX	Lawrence	Federal
100	Human		1/17/2023 22:47		Deadwood Fuels RX		RX	Lawrence
680	Human		1/24/2023 15:43	4/3/2023 19:15	Stein RX	RX	Lawrence	Federal
15	Human		1/31/2023 15:00	2/7/2023 19:44	Neptune RX	RX	Lawrence	Federal
1	Human		1/31/2023 15:13	2/24/2023 15:21	Spearfish Work Center RX		RX	Lawrence
690	Human		2/14/2023 15:19	3/24/2023 16:15	Merlin RX	RX	Lawrence	Private
420	Human		2/21/2023 14:59		Chain POL RX	RX	Lawrence	Federal
11.1	Human		2/24/2023 16:30	4/17/2023 18:00	Deadwood Firewise PBX RX		RX	Lawrence
0.1	Undetermined		5/1/2023 19:16	5/1/2023 19:51	MM 24	WF	Lawrence	Private
0.1	Undetermined		7/13/2023 16:16		Slash Pile	WF	Lawrence	Private
0.1	Human		7/19/2023 17:57	7/19/2023 18:40	Slaughterhouse	WF	Lawrence	Federal
0.1	Undetermined		7/20/2023 19:21	7/20/2023 20:05	Shirtail	WF	Lawrence	Private
0.2	Undetermined		7/23/2023 23:37	7/26/2023 18:55	Hay Creek	WF	Lawrence	Private
0.1	Natural		7/30/2023 23:47		Estes	WF	Lawrence	Federal
0.1	Human		8/8/2023 21:21	8/10/2023 21:23	Jersey	WF	Lawrence	Private
0.1	Human		8/9/2023 17:11	8/9/2023 17:30		21	Lawrence	Private
0.1	Natural		8/24/2023 22:18	8/26/2023 16:00	Old Ridge	WF	Lawrence	Federal
0.1	Human		9/2/2023 20:52	9/6/2023 17:35	Eagle	WF	Lawrence	Federal
0.1	Undetermined		9/4/2023 20:58	9/6/2023 19:00	Higgins	WF	Lawrence	Private
0.77	Natural		9/4/2023 23:48	9/14/2023 20:50	Nemo Ridge	WF	Lawrence	Federal
0.1	Natural		9/14/2023 4:12	9/14/2023 17:50	Crow Creek	WF	Lawrence	Federal
35	Undetermined		10/17/2023 19:10		Ruby Flats RX	RX	Lawrence	Federal
31	Undetermined		12/27/2023 14:59		Fantail RX	RX	Lawrence	Federal
126	Undetermined		1/2/2024 16:01		Yellow Creek RX	RX	Lawrence	Federal
10	Undetermined		1/3/2024 17:44		Spearfish Workcenter Admin RX		RX	Lawrence

5	Undetermined		1/3/2024 22:10	1/22/2024 20:30	Deadwood Fuels RX		RX	Lawrence	Lawrence
	Undetermined		1/8/2024 14:52		Sugarloaf RX		RX	Lawrence	Federal
10	Undetermined		1/8/2024 18:04	1/22/2024 20:30	Cougar Hand Pile RX			RX	Lawrence
360	Undetermined		1/9/2024 14:55		Pounder RX		RX	Lawrence	Federal
690	Undetermined		1/11/2024 15:02	2/1/2024 19:12	Cougar RX		RX	Lawrence	Federal
15	Human		1/12/2024 15:33	1/25/2024 18:30	Spearfish Canyon RX			RX	Lawrence
49	Undetermined		1/12/2024 16:37	6/1/2024 18:00	Nevada Gulch RX		RX	Lawrence	Federal
890	Undetermined		1/17/2024 15:22		Maverick Machine Piles RX			RX	Lawrence
	Undetermined		1/17/2024 15:28		Slider Machine Piles RX			RX	Lawrence
	Undetermined		1/18/2024 15:39	2/12/2024 17:28	Hollywood RX		RX	Lawrence	Federal
5	Undetermined		2/14/2024 15:03	2/22/2024 17:16	Neptune RX		RX	Lawrence	Federal
0.1	Human		3/28/2024 16:27	4/3/2024 16:34	Slash Pile		WF	Lawrence	Private
0.1	Human		4/18/2024 19:22	4/19/2024 17:26	Exit 23		WF	Lawrence	Private
	Undetermined		4/22/2024 17:15		Beartown RX		RX	Lawrence	Federal
0.1	Human		4/29/2024 17:05	5/2/2024 18:20	Spearfish Canyon		WF	Lawrence	Private
0.1	Natural		5/7/2024 2:24	5/8/2024 22:00	Bear Ridge		WF	Lawrence	Private
0.1	Natural		5/29/2024 23:04	6/4/2024 16:07	Pendo		WF	Lawrence	Private
0.1	Undetermined		6/9/2024 1:38	6/9/2024 2:11	Crook City		WF	Lawrence	Private
0.6	Human		6/12/2024 0:49		Crusher Hill		WF	Lawrence	Federal
0.1	Human		6/13/2024 19:57	6/18/2024 18:15	Steamboat		WF	Lawrence	Federal
0.1	Human		6/21/2024 0:26	7/10/2024 19:30	Billboard		WF	Lawrence	Private
0.1	Human		6/27/2024 15:45	6/29/2024 20:34	Whitewood Creek		WF	Lawrence	Private
0.1	Human		6/28/2024 23:33	6/29/2024 21:34	MM 8		WF	Lawrence	Private
0.1	Human		6/30/2024 19:58	7/5/2024 20:43	Tamarac		WF	Lawrence	Private
0.1	Human		7/10/2024 16:42	7/10/2024 18:00	Five		WF	Lawrence	Federal
2.3	Natural		7/13/2024 2:11	7/20/2024 20:00	White Gate		WF	Lawrence	Federal
0.1	Natural		7/13/2024 14:57	7/16/2024 21:45	Bogus		WF	Lawrence	Federal
0.1	Human		7/13/2024 20:11	7/15/2024 22:30	Stage Yard		WF	Lawrence	Federal
0.11	Natural		7/14/2024 23:25	7/17/2024 20:00	Beaver Spring		WF	Lawrence	Federal
0.1	Natural		7/19/2024 22:17	7/21/2024 18:00	Thoen Stone		WF	Lawrence	Federal
0.1	Human		7/26/2024 0:51	7/26/2024 23:45	Spring Canyon		WF	Lawrence	Private
0.1	Natural		7/28/2024 19:50	7/31/2024 18:53	Rifle Pit		WF	Lawrence	Federal
0.25	Natural		7/29/2024 22:58	8/1/2024 17:50	Spearfish Peak		WF	Lawrence	Federal
0.2	Natural		8/5/2024 14:59	8/9/2024 20:30	Telegraph		WF	Lawrence	Federal
0.1	Natural		8/7/2024 3:41	8/9/2024 20:00	Elk Horn Peak		WF	Lawrence	Private

0.56	Natural		8/7/2024 19:22	8/12/2024 19:00	Anderson	WF	Lawrence	Private
0.1	Natural		8/7/2024 20:52	8/12/2024 19:30	Saint Onge Road	WF	Lawrence	Private
1.25	Natural		8/13/2024 20:38	8/20/2024 18:48	Rifle Pit Canyon	WF	Lawrence	Federal
0.1	Natural		8/14/2024 14:43	8/17/2024 21:06	Breakneck	WF	Lawrence	Federal
0.75	Natural		8/16/2024 18:02	8/23/2024 19:13	Elmore	WF	Lawrence	Federal
0.1	Natural		8/21/2024 21:27	8/23/2024 19:24	Moskee	WF	Lawrence	Federal
0.1	Natural		8/21/2024 23:49	8/23/2024 17:45	Eden Road	WF	Lawrence	Private
0.3	Natural		8/22/2024 19:25	8/28/2024 17:49	Clayton Draw	WF	Lawrence	Federal
1.9	Natural		8/24/2024 22:14	9/5/2024 22:07	Mill	WF	Lawrence	Federal
1	Natural		8/25/2024 20:47	9/6/2024 18:30	Big Hill	WF	Lawrence	Federal
5.1	Natural		8/31/2024 18:45	9/13/2024 16:15	Long Draw	WF	Lawrence	Federal
0.1	Human		9/7/2024 14:37	9/7/2024 16:45	Bucking Rail	WF	Lawrence	Federal
18.1	Natural		9/10/2024 23:27		Meadow Creek	WF	Lawrence	Federal
0.1	Natural		9/16/2024 15:26	9/20/2024 20:08	Spearfish	WF	Lawrence	Federal
0.1	Natural		9/16/2024 20:33	9/19/2024 18:46	Besant	WF	Lawrence	Federal
0.1	Natural		9/16/2024 23:03	9/19/2024 19:14	Tillson	WF	Lawrence	Federal
0.1	Human		9/26/2024 16:56	9/28/2024 17:40	Gulch	WF	Lawrence	Federal
0.1	Human		9/29/2024 14:54	10/1/2024 21:30	Homestake	WF	Lawrence	Private
0.1	Undetermined		9/30/2024 23:41	10/3/2024 17:45		WF	Lawrence	Private
0.1	Undetermined		10/6/2024 23:44	10/7/2024 1:30	Old Sawmill	WF	Lawrence	Federal
0.1	Human		10/9/2024 16:57	10/10/2024 22:21	Grier	WF	Lawrence	Private
0.1	Human		10/13/2024 2:44	10/13/2024 3:50	Roosevelt	WF	Lawrence	Federal
0.1	Human		10/23/2024 23:18	10/24/2024 0:01	Adelphia	WF	Lawrence	Private
0.1	Human		10/26/2024 14:30	10/28/2024 18:09	Englewood	WF	Lawrence	Federal
0.25	Undetermined		11/21/2024 17:20	11/22/2024 20:45	MM 20	WF	Lawrence	Private
4	Human		12/9/2024 20:07	12/18/2024 18:21	Coyote Ridge Fuels RX		RX	Lawrence
1.2	Undetermined		12/9/2024 20:25		Boulder Canyon Rx		RX	Lawrence
7	Undetermined		12/9/2024 23:06	12/18/2024 20:30	Iceman RX	RX	Lawrence	Federal

Future Hazard Probability				
Event Type	Blizzard	Heavy Snow	Winter Storm	Winter Weather
Probability	Med	High	High	High

Calculations Based Off Historical Data					
Number of days with historical events	25	63	135	56	
Number of years with historical events	11	21	27	14	
Years of recorded data	27 years (1996-2023)	27 years (1996-2023)	27 years (1996-2023)	15 years (2008-2023)	
Possible number of days with event per year	0.93	2.33	5	3.73	
Probability of future events including climate variations	41%	78%	100%	93%	
Occurrence calculation	25/27 = 0.93	63/27 = 2.33	135/27 = 5	56/15 = 3.73	
Probability calculation	11/27 = 0.41	21/27 = 0.78	27/27 = 1	14/15 = 0.93	

Probability of future winter storm occurrence. Calculations based on NOAA weather data. (NOAA: National Centers for Environmental Information. 2025. *Storm Events Database*).

CZ_NAME_STR	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
NORTHERN BLACK HILLS (ZONE)	1/17/1996	100	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/17/1996	100	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/23/1996	1800	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/23/1996	1800	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/14/1996	400	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/14/1996	400	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/16/1996	200	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/16/1996	200	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/4/1997	0	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/4/1997	0	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/9/1997	400	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/9/1997	400	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/15/1997	300	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/15/1997	300	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/5/1997	0	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/5/1997	0	Blizzard	0	0	0	0
NORTHERN BLACK HILLS /	2/24/1998	1200	Blizzard	0	0	0	0
NORTHERN FOOT HILLS /	2/24/1998	1200	Blizzard	0	0	0	0
NORTHERN BLACK HILLS /	3/1/1998	1	Blizzard	0	0	0	0

NORTHERN FOOT HILLS (ZONE)	2/25/2000	1000	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/7/2000	2100	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/18/2000	2000	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/18/2000	2300	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	5/1/2008	1500	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	5/1/2008	2000	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/5/2008	1900	Blizzard	0	0	100000	0
NORTHERN FOOT HILLS (ZONE)	12/13/2008	1600	Blizzard	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/23/2009	700	Blizzard	0	0	100000	0
NORTHERN FOOT HILLS (ZONE)	3/23/2009	800	Blizzard	0	0	50000	0
NORTHERN FOOT HILLS (ZONE)	3/30/2009	0	Blizzard	0	0	50000	0
NORTHERN FOOT HILLS (ZONE)	12/25/2009	300	Blizzard	0	0	20000	0
NORTHERN BLACK HILLS (ZONE)	10/3/2013	2100	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/3/2013	2200	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/31/2014	200	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/25/2016	1400	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/13/2019	800	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/30/2019	100	Blizzard	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/13/2022	700	Blizzard	0	0	0	0

CZ_NAME_STR	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
NORTHERN BLACK HILLS (ZONE)	1/1/1996	1	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/1/1996	1	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/29/1996	2000	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/29/1996	2000	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/1/1996	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/1/1996	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/17/1996	2200	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/11/1996	900	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/11/1996	900	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/13/1996	0	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/13/1996	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	9/25/1996	700	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/16/1996	700	Heavy Snow	0	0	8000	0
NORTHERN FOOT HILLS (ZONE)	11/30/1996	1200	Heavy Snow	0	0	0	0

NORTHERN BLACK HILLS (ZONE)	12/1/1996	2300	Heavy Snow	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/1/1996	2300	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/21/1996	600	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS / LAWRENCE EXCEPT N / LAWRENCE EXCEPT SW MEADE (ZONE)	11/14/1997	1200	Heavy Snow	0	0	0	0	0
NORTHERN FOOT HILLS / N LAWRENCE / X SW BUTTE / PART OF SW MEADE (ZONE)	11/14/1997	1200	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS / LAWRENCE EXCEPT N / LAWRENCE EXCEPT SW MEADE (ZONE)	12/10/1997	100	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/27/1997	1300	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	6/2/1998	2100	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/4/1998	700	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/16/1998	1700	Heavy Snow	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/5/1999	900	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/18/1999	1	Heavy Snow	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/18/1999	800	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/1/2000	450	Heavy Snow	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/1/2000	910	Heavy Snow	0	0	89000	0	0
NORTHERN BLACK HILLS (ZONE)	11/26/2001	840	Heavy Snow	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/26/2001	1800	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/28/2001	800	Heavy Snow	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/25/2004	600	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/25/2004	600	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/28/2004	1700	Heavy Snow	0	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/28/2004	1900	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS / LAWRENCE EXCEPT N / LAWRENCE EXCEPT SW MEADE (ZONE)	10/29/2004	800	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/12/2006	500	Heavy Snow	0	0	0	0	0
NORTHERN BLACK HILLS / LAWRENCE EXCEPT N / LAWRENCE EXCEPT SW MEADE (ZONE)	4/6/2006	2000	Heavy Snow	0	0	0	0	0

NORTHERN BLACK HILLS (ZONE)	5/9/2006	400	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	9/22/2006	800	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/9/2006	2000	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/12/2007	500	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/30/2007	1600	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/15/2008	1100	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/11/2008	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/17/2008	1800	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/6/2008	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/28/2008	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/5/2008	2300	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	5/1/2008	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	5/11/2010	2200	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/30/2011	1800	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/1/2011	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/22/2012	200	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/1/2013	1800	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/13/2013	1400	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/22/2013	1000	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/21/2013	1800	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/21/2013	2000	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/14/2013	1300	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/14/2013	1400	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/13/2014	800	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/11/2014	0	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/11/2014	0	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	9/10/2014	2000	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/3/2018	1200	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/5/2018	2000	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/5/2018	2000	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	5/1/2019	100	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	5/21/2019	500	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	5/21/2019	1100	Heavy Snow	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/20/2019	600	Heavy Snow	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/20/2019	600	Heavy Snow	0	0	0	0

NORTHERN BLACK HILLS (ZONE)	9/7/2020	1800	Heavy Snow		0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/27/2021	1300	Heavy Snow		0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/27/2021	1300	Heavy Snow		0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/9/2021	0	Heavy Snow		0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/6/2022	200	Heavy Snow		0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/14/2022	1000	Heavy Snow		0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/16/2022	2000	Heavy Snow		0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/25/2023	0	Heavy Snow		0	0	0	0

CZ_NAME_STR	BEGIN_DATE	BEGIN_TIME	EVENT_TYPE	DEATHS	INJURIES	DAMAGE_PROPERTY	DAMAGE_CROPS
NORTHERN BLACK HILLS (ZONE)	10/11/2008	2000	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/11/2008	2200	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/4/2009	1500	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/9/2010	1200	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/9/2010	1500	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/21/2010	1900	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/23/2010	200	Winter Weather	0	0	25000	0
NORTHERN FOOT HILLS (ZONE)	12/23/2010	200	Winter Weather	0	0	20000	0
NORTHERN BLACK HILLS (ZONE)	10/5/2012	1800	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/6/2012	2200	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/2/2014	500	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/2/2014	500	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	9/10/2014	2230	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/14/2014	2000	Winter Weather	0	0	0	0

NORTHERN FOOT HILLS (ZONE)	11/14/2014	2100	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/2/2015	2300	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/1/2015	100	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/1/2015	100	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/22/2016	2200	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/5/2016	100	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/2/2017	400	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/2/2017	400	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/24/2017	700	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/31/2017	500	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/7/2017	1800	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/23/2017	800	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/23/2017	900	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/2/2017	1900	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/25/2017	200	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/25/2018	2200	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/13/2018	900	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	12/25/2018	2000	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/25/2019	0	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/6/2019	400	Winter Weather	0	0	0	0

NORTHERN FOOT HILLS (ZONE)	2/6/2019	800	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/14/2019	2300	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/15/2019	0	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/30/2019	500	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	5/1/2019	100	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	11/10/2019	1200	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/10/2019	1200	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/2/2020	2000	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/6/2020	500	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/8/2020	1500	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/8/2020	1600	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/12/2020	0	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/27/2020	0	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/13/2020	1500	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/19/2020	300	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	4/19/2020	300	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	9/7/2020	2100	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/4/2021	1300	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/19/2021	2000	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	10/19/2021	2100	Winter Weather	0	0	0	0

NORTHERN BLACK HILLS (ZONE)	12/10/2021	0	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	12/10/2021	200	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/24/2022	1000	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/24/2022	1100	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/10/2022	2100	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/10/2022	2100	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/21/2022	1300	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/7/2022	700	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/29/2022	1400	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/29/2022	1600	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	4/1/2022	0	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	10/23/2022	1800	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	11/14/2022	1500	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/2/2023	100	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	1/27/2023	1300	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	1/27/2023	1300	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	2/14/2023	1200	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	2/28/2023	1430	Winter Weather	0	0	0	0
NORTHERN BLACK HILLS (ZONE)	3/5/2023	1700	Winter Weather	0	0	0	0
NORTHERN FOOT HILLS (ZONE)	3/5/2023	1700	Winter Weather	0	0	0	0

NORTHERN BLACK HILLS (ZONE)	3/30/2023	2300	Winter Weather	0	0	0	0
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Appendix C

Public Comment, Survey Summary, Email to Emergency Managers

Public Comments:

No public comments were received during the public comment review period for the plan draft.

Lawrence County Mitigation Survey Summaries

1. Please check all of the following that apply to you:

I live in Central City	0.00%
I live in Deadwood	26.57%
I live in Lead	32.17%
I live in Spearfish	13.99%
I live in Whitewood	0.70%
I live outside of city limits in Lawrence County	20.28%
I live outside of Lawrence County	6.29%
I work in Lawrence County	17.48%
I own a business in Lawrence County	9.09%
Prefer not to answer	2.80%
Other (please specify subdivision/unincorporated area):	
Other: Nemo, Sturgis	

2. What is your age range?

Under 18	0.00%
18-24	1.39%
25-34	6.94%
35-44	18.75%
45-54	22.22%
55-64	20.14%
65+	29.17%
Prefer not to answer	1.39%

3. How do you receive information on ways to reduce risks and impacts caused by natural hazards? Select all that apply.

County/City Facebook or Website	59.03%
Newspaper	28.47%
Police/Fire/EMS	19.44%
Informational Brochures	6.25%
Word of Mouth	41.67%

Public Awareness Events	9.72%
Schools	2.78%
News via TV or Smartphone	42.36%
Local Radio	22.22%
Social Media	45.83%
CodeRed	33.33%
Not Sure	4.86%
Prefer not to answer	1.39%
Other (please specify)	4.17%

Other: Google, FEMA, Insurance Comp. City Commissioner Emails

4. How concerned are you about the following natural disasters impacting Lawrence County?

	Very Concerned	Somewhat Concerned	Neutral	Not Very Concerned	Not Concerned	Not Sure
Dam Failure	7	17	11	26	69	6
Drought	36	69	12	9	9	0
Earthquakes	2	11	19	30	72	2
Expansive Soils	10	24	33	21	25	22
Extreme Temperatures (hot/cold)	31	51	24	15	13	1
Flash Flooding (e.g. streets)	17	61	19	20	18	1
Flooding (river/stream)	18	58	19	21	18	1
High/Severe Wind	38	65	17	9	6	0
Landslides/Mudslides	25	55	25	16	11	3
Subsidence	11	33	43	8	13	28
Summer Storms (hail, thunderstorms, heavy rain)	69	57	4	4	2	0
Tornados	22	65	13	23	13	0
Wildfire	81	48	3	2	1	0
Winter Storms (blizzards, heavy snow, ice)	60	56	11	3	6	0

5. In the past 5 years, which of the following natural hazards have you experienced in Lawrence County? Select all that apply.

Dam Failure	0.00%
Drought	36.84%
Earthquakes	0.00%
Expansive Soils	2.26%
Extreme Temperatures (hot/cold)	72.18%

Flash Flooding (e.g. streets)	21.05%
Flooding (river/stream)	17.29%
High/Severe Wind	69.17%
Landslides/Mudslides	6.02%
Subsidence	2.26%
Summer Storms (hail, thunderstorms, heavy rain)	89.47%
Tornados	18.05%
Wildfire	11.28%
Winter Storms (blizzard, heavy snow, ice)	85.71%
Other (please specify)	0.00%

Other: Hazmat, SD DOT challenges, evacuating, concern dam failure risk higher than public is told, county has too much enthusiasm for logging not considering negative impacts logging has – cutting fire resistant trees – replacing with weed-prone tree farms, unsustainable development creating water concerns.

6. In the past 5 years, did you experience any of the following caused by natural hazard(s) in Lawrence County: Select all that apply.

Yes	28.36%
No	29.10%
Not sure	42.54%

7. Do you feel like your community could/should do more to lessen the impacts of natural hazards that occur in your area?

Yes	28.36%
No	29.10%
Not sure	42.54%

8. If yes, what would help lessen the impacts of natural hazards in Lawrence County? (e.g. improving drainage, building with fire-resistant materials, etc.)

Summary of Responses

Improved drainage systems are needed to prevent flooding on streets and in problem areas like Sunnyhill Rd and Miners Ave. New developments should require stormwater studies and robust drainage plans to protect lower elevations. Drainage in older areas and Spearfish must be enhanced to reduce flood risks. Erosion control should be enforced, and waterways like creeks and drains need cleaning. Snow removal must improve after severe blizzards to keep roads clear. Wildfire prevention requires more fuel reduction, forest thinning, and Firewise programs. Buffers should be created around

communities to reduce wildfire threats. Roads need repairs, and secondary access routes should stay open. Storm sewers and building codes should be upgraded, including hail-resistant materials. Communities need better access to evidence-based information for preparedness. Elderly residents should get help managing trees, and education on weed control and invasive species is essential. Large hillside projects should be restricted, and fire-resistant materials should be mandatory in wildfire-prone areas.

9. Please provide any additional comments or concerns you have related to natural hazard impacts in Lawrence County.

Summary of Responses

Roads: Plows do well, but snowstorms leave roads icy and dangerous, even with 4WD. Lead's residential roads are failing due to extreme weather—needs infrastructure help. Insurance: Curious how natural hazards (floods, wildfires) affect premiums and what can mitigate them, as some insurers drop coverage elsewhere. Hazards: High winds, drought, and fires together worry. The county needs a plan. One road in/out is risky; two exits are needed. Wildfires: Logging shutdowns may increase fire risk; Firewise helps, but you can't use saws due to age. Development: New housing on unstable land and tree removal raise flooding/erosion risks, hurting quality of life. Mining: Development-loss of trees maybe linked to higher tornado activity; detention ponds may overflow in storms. General: Hazards are natural, but county must act to reduce impacts—better roads, exits, and resource preservation.

Lawrence County Mitigation Plan Review

From Kailey Snyder <ksnyder@wrbsc.com>

Date Tue 3/11/2025 1:31 PM

To Sean Henderson <sean.henderson@meadecounty.org>; fred.lamphere@buttesd.org
<fred.lamphere@buttesd.org>; dustinw@pennco.org <dustinw@pennco.org>;
emergencymanagement@crookcounty.wy.gov <emergencymanagement@crookcounty.wy.gov>;
gnelson@westongov.com <gnelson@westongov.com>

Good afternoon,

I am reaching out to you as a surrounding county emergency manager to share the draft of the Lawrence County Natural Hazard Mitigation Plan update. If you could please provide any comments on the plan by April 1, 2025.

lawrence.sd.us/DocumentCenter/View/2105/Lawrence-County-Natural-Hazard-Mitigation-Plan-Draft

Much thanks,
~Kailey

Kailey Snyder

Community Development/Resiliency Specialist

Black Hills Council of Local Governments

730 E Watertown Street | Rapid City, SD 57701

P: 605-394-2681 E: Ksnyder@wrbsc.com

Appendix D

Hazard Definitions

Natural Hazards in the Plan Jurisdiction

Blizzards are a snowstorm that lasts at least 3 hours with sustained wind speeds of 35 mph or greater, visibility of less than a quarter mile, temperatures lower than 20°F and white out conditions. Snow accumulations vary, but another contributing factor is loose snow existing on the ground which can get whipped up and aggravate the white out conditions. When such conditions arise, blizzard warnings or severe blizzard warnings are issued. Severe blizzard conditions exist when winds obtain speeds of at least 45 mph plus a great density of falling or blowing snow and a temperature of 10°F or lower.

Drought is an extended period of months or years when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. It can have a substantial impact on the ecosystem and agriculture of the affected region. Although droughts can persist for several years, even a short, intense drought can cause significant damage and harm the local economy. This global phenomenon has a widespread impact on agriculture. Local drinking water sources such as the Madison Aquifer rely on precipitation and snowmelt to recharge sufficiently, so drought can have severe impacts on the region's water supply; there's currently no secondary source of water for most of western South Dakota so problems of drought can be compounding when added to the fact that growth and development in the region are at a record high.

Dam Failure, dams' function to serve the needs of flood control, recreation, and water management. During a flood, a dam's ability to serve as a control agent may be challenged. An excessive amount of water may result in a dam breach, simply an overflow. Dams that are old or unstable, dams that receive extreme amounts of water, or dams that get debris pile-up behind their face may result in dam failure, a cracking and/or breaking.

Earthquakes are a sudden rapid shaking of the earth caused by the shifting of rock beneath the earth's surface. Earthquakes can cause buildings and bridges to collapse, disrupt gas, electric and phone lines, and often cause landslides, flash floods, fires, avalanches, and tsunamis. Larger earthquakes usually begin with slight tremors but rapidly take the form of one or more violent shocks and are followed by vibrations of gradually diminishing force called aftershocks. The underground point of origin of an earthquake is called its focus; the point on the surface directly above the focus is the epicenter.

Expansive Soils are soil types that swell and shrink depending on the moisture content. Structures built on these soils can experience damage such as shifting, cracking, and breaking due to the swelling and sinking of the soils.

Extreme Cold what constitutes extreme cold, and its effects can vary across different areas of the country. In regions relatively unaccustomed to winter weather, near freezing temperatures are considered "extreme cold."

Extreme Heat also known as a Heat Wave, is a prolonged period of excessively hot weather, which may be accompanied by high humidity. There is no universal definition of a heat wave; the term is relative to the usual weather in the area.

Flooding is an overflow of water that submerges land, producing measurable property damage or forcing evacuation of people and vital resources. Floods can develop slowly as rivers swell during an extended period of rain, or during a warming trend following a heavy snow. Even a very small

stream or dry creek bed can overflow and create flooding. Two different types of flooding hazards are present within Lawrence County.

Inundation Flooding:

The greatest risks are realized typically during a rapid snowmelt before ice is completely off all of the rivers.

Flash Flooding:

This flooding is primarily localized, though enough rain can be produced to cause inundation flooding in areas along rivers and streams. Heavy, slow moving thunderstorms often produce large amounts of rain. With the county made up of 40% clayey soils, the very slow permeability of these soils the runoff is rapid, increasing the risk of flash flooding.

Freezing Rain/Ice temperatures dropping below 30 degrees Fahrenheit, accompanied with rain fall, can sometimes create freezing rain or ice storms. Freezing rain covers objects with ice, creating dangerous conditions due to slippery surfaces, platforms, sidewalks, roads, and highways. Black ice, usually unnoticeable, creates dangerous conditions, especially for traffic. Additionally, a quarter inch of frozen rain can significantly damage trees, electrical wires, weak structures, and other objects due to the additional weight bearing down on them.

Hail is formed through rising currents of air in a storm. These currents carry water droplets to a height at which they freeze and subsequently fall to earth as round ice particles. Hailstones usually consist mostly of water ice and measure between 5 and 150 millimeters in diameter, with the larger stones coming from severe and dangerous thunderstorms.

Heavy Rain is defined as precipitation falling with intensity in excess of 0.30 inches (0.762 cm) per hour. Short periods of intense rainfall can cause flash flooding while longer periods of widespread heavy rain can cause rivers to overflow.

Ice Jams occur when warm temperatures and heavy rain cause snow to melt rapidly. Snow melt combined with heavy rains can cause frozen rivers to swell, which breaks the ice layer on top of the river. The ice layer often breaks into large chunks, which float downstream and often pile up near narrow passages other obstructions, such as bridges and dams.

Landslide is a geological phenomenon which includes a wide range of ground movement, such as rock falls, deep failure of slopes and shallow debris flows, which can occur in offshore, coastal, and onshore environments. Although the action of gravity is the primary driving force for a landslide to occur, there are other contributing factors build up specific sub-surface conditions that make the area/slope prone to failure, whereas the actual landslide often requires a trigger before being released.

Lightning results from a buildup of electrical charges that happens during the formation of a thunderstorm. The rapidly rising air within the cloud, combined with precipitation movement within the cloud, results in these charges. Giant sparks of electricity occur between the positive and negative charges both within the atmosphere and between the cloud and the ground. When the potential between the positive and negative charges becomes too great, there is a discharge of electricity, known as lightning. Lightning bolts reach temperatures near 50,000° F in a split second. The rapid heating and expansion and cooling of air near the lightning bolt causes thunder.

Severe Winter Storms deposit four or more inches of snow in a 12-hour period or six inches of snow during a 24-hour period. Such storms are generally classified into four categories with some taking the characteristics of several categories during distinct phases of the storm. These categories include freezing rain, sleet, snow, and blizzard. Winter storms can range from moderate snow to blizzard conditions and can occur between October and April. The months of May, June, July, August, and September could possibly see snow, though the chances of a storm are very minimal. Like summer storms, winter storms are considered a weather event not a natural hazard, and thus will not be evaluated as a natural hazard throughout this plan.

Sleet does not generally cling to objects like freezing rain, but it does make the ground very slippery. This also increases the number of traffic accidents and personal injuries due to falls. Sleet can severely slow down operations within a community. Not only is there a danger of slipping, but with wind, sleet pellets become powerful projectiles that may damage structures, vehicles, or other objects.

Snow is a common occurrence throughout the County during the months from October to April. Snow is a major contributing factor to flooding, primarily during the spring months of melting.

Strong winds are usually defined as winds over 40 m/h, which are common in the area. High winds can cause destruction of property and create a safety hazard resulting from flying debris. Strong winds also include severe localized wind blasting down from thunderstorms. These downward blasts of air are categorized as either microbursts or macrobursts depending on the amount geographical area they cover. Microbursts cover an area less than 2.5 miles in diameter and macrobursts cover an area greater than 2.5 miles in diameter.

Subsidence is defined as the motion of a surface as it shifts downward relative to a datum. The opposite of subsidence is uplift, which results in an increase in elevation. There are several types of subsidence such as dissolution of limestone, mining-induced, faulting induced, isostatic rebound, extraction of natural gas, groundwater related, and seasonal effects. Depressions, cracks, and sinkholes in the earth's surface which can threaten people and property. Subsidence depressions, which normally occur over many days to a few years, may damage structures with low strain tolerances such as dams, factories, nuclear reactors, and utility lines.

Summer Storms are generally defined as atmospheric hazards resulting from changes in temperature and air pressure which cause thunderstorms that may cause hail, lightning, strong winds, and tornados. Summer storms are considered a weather event rather than a natural hazard; therefore, summer storms are not evaluated as a natural hazard throughout this plan.

Thunderstorms are formed when moisture, rapidly rising warm air, and a lifting mechanism such as clashing warm and cold air masses combine. The three most dangerous items associated with thunderstorms are hail, lightning, and strong winds.

Tornados are violent windstorms that may occur singularly or in multiples as a result of severe thunderstorms. They develop when cool air overrides warm air, causing the warm air to rapidly rise. Tornados tend to happen in the summer. Many of these resulting vortices stay in the atmosphere, though touchdown can occur. The Fujita Tornado Damage Scale categorizes tornadoes based on their wind speed. In 2010 NOAA began transitioning to the Enhanced Fujita Scale based on the intensity of tornados:

Fujita Damage Scale – Prior 2010

- F0=winds less than 73 m/h
- F1=winds 73-112 m/h
- F2=winds 113-157 m/h
- F3=winds 158-206 m/h
- F4=winds 207-260 m/h
- F5=winds 261-318 m/h
- F6=winds greater than 318 m/h

Enhanced Fujita Scale 2010

- EFU=unknown
- EF0=winds 65-85 m/h
- EF1=winds 85-110 m/h
- EF2=winds 111-135 m/h
- EF3=winds 136-165 m/h
- EF4=winds 166-200 m/h
- EF5=winds greater than 200 m/h

Wildland Fires are uncontrolled conflagrations that spread freely through the environment. Other names such as brush fire, bushfire, forest fire, grass fire, hill fire, peat fire, vegetation fire, and wildland fire may be used to describe the same phenomenon. A wildfire differs from the other fires by its extensive size; the speed at which it can spread out from its original source; its ability to change direction unexpectedly; and to jump gaps, such as roads, rivers, and fire breaks. Fires start when an ignition source is brought into contact with a combustible material that is subjected to sufficient heat and has an adequate supply of oxygen from the ambient air. Ignition may be triggered by natural sources such as a lightning strike or may be attributed to a human source such as discarded cigarettes, sparks from equipment, and arched power lines.

Appendix E
Mitigation Goals and Action Updates
from 2019

2019 Mitigation Actions Updates

Lawrence County

Lead Agency: Lawrence County & Department of Interior/BLM

Objective: Reduce the risk from uncontrolled wildland fire.

Activities: Continue collaboration with all entities that provide fire protection in Lawrence County. Cooperate with planning and zoning ordinances to help develop survivable space and promote fire resistive building practices. Continue participation in the Firewise Program. Continue hazardous fuels reduction cost-share projects throughout Lawrence County to help reduce the risk of uncontrolled wildland fire.

Update: Ongoing – incorporated into various actions as part of update.

Lead Agency: Lawrence County Emergency Management

Objective: On-going upgrade of county wide warning systems, communications, flood gauges, emergency notification systems and communications buildings. To provide public notification and communication upgrades as needed.

Activities: Seek community participation in the planning process. Research communication and warning system needs. Identify any new technology that enhances warning capability. Continuing partnership with the USGS. Evaluate the need for flood gauges on other streams and enhance siren systems. Continuing partnership with NWS and Weather Radio promotion.

Update: Ongoing – incorporated into various actions as part of update.

Lead Agency: St Onge

Objective: Advance community awareness for fire and natural disaster.

Activities: Project initiated by the St. Onge fire department to improve community preparedness through public education.

Update: Ongoing - incorporated into various actions as part of update.

Lead Agency: St Onge

Objective: Prepare emergency responders with Hazmat training.

Time line: Ongoing

Activities: Preparing St Onge emergency responders with important Hazmat training is an important resource that will help provide more support for the local community.

Update: Removed hazard.

Lead Agency: St Onge

Objective: Levy improvements

Activities: Improve the levy around the sewage lagoon to prevent False Bottom creek run off from impacting the containment pond.

Update: Ongoing. Not completed incorporated into update.

Lead Agency: St Onge

Objective: Generator purchase

Timeline: Ongoing

Activities: Purchase generator for the fire hall, also to be used for the shelter.

Update: Not complete – incorporated into actions as part of update. Note: St. Onge is unincorporated community, would be under Lawrence County’s action items.

Lead Agency: St Onge

Objective: Traffic and speed control

Activities: Create a public safety program for traffic control and speed control for Highway 34.

Update: Removed Hazard.

Lead Agency: Lead-Deadwood Sanitary District

Objective: Install generator at the sewer lift station

Activities: Install generator at the sewer lift station located at 516 S. Main Street in Lead.

Update: Not complete - incorporated into various actions as part of update. Note: Lead-Sanitary Dist. Isn’t adopting member of Mitigation Plan. For FEMA funding would need to apply though adopting member.

Lead Agency: Lead-Deadwood Sanitary District

Objective: Continue maintenance regarding the water intake collection system

Activities: Continue maintenance regarding the water intake collection system that consists of clay and redwood piping that was installed in the 1800's before Department of Agriculture and USFS were agencies. Replace deteriorated or damaged water lines. Inspect and clean lines and blockages.

Update: Ongoing. San. Dist. Is continuing to update system. Note: Lead-Sanitary Dist. Isn't adopting member of Mitigation Plan. For FEMA funding would need to apply though adopting member.

Lead Agency: Butte Electric Cooperative, Inc.

Objective: Whitewood Substation 300 Circuit 3.75 Miles of 3-phase Overhead

Activities: Renovate overhead lines to underground direct burial distribution lines.

Lead Agency: Butte Electric Cooperative, Inc.

Objective: Boulder Canyon Substation Ericson Road to Hill Place 6 Miles of 1-phase Overhead.

Activities: Renovate overhead lines to underground direct burial distribution lines.

Lead Agency: Butte Electric Cooperative, Inc.

Objective: Spearfish Substation 200 Circuit 2.75 Miles of 3-phase Overhead

Activities: Renovate overhead lines to underground direct burial distribution lines.

Lead Agency: Butte Electric Cooperative, Inc.

Objective: Mountain View Substation Ryther Road to Hwy 34 4.75 Miles of 3-phase Overhead

Activities: Renovate overhead lines to underground direct burial distribution lines.

Lead Agency: Butte Electric Cooperative, Inc.

Objective: Boulder Canyon Substation Elk Creek Road .5 Miles of 1-phase Overhead

Activities: Renovate overhead lines to underground direct burial distribution lines.

Updates (All): Private entity. Ongoing – Butte Electric works to bury lines when funding is available – incorporated into update actions. For FEMA funding would need to apply though adopting member.

Central City

Lead Agency: Central City

Objective: Bank stabilization and creek channel improvement

Activities: Improve bank stabilization and creek channels of drainages through Central City. This may include rip rap, gabion baskets and other approved mitigation strategies.

Update: Not complete. During discussions Central City is believed to not have jurisdiction on this area.

Lead Agency: Central City

Objective: Improve or develop storm drops for Golden Gate Road

Activities: Develop or improve drainage from storm water that may impact properties along Golden Gate Road. Storm drops could divert water into the creek.

Update: Completed initial study. The city is discussing potential funding potentials.

Lead Agency: Central City.

Objective: Minimize flooding and damage where Sawpit Gulch, Hidden Gulch and Pocket Gulch meet Deadwood Creek.

Activities: Riprap or gabion baskets need to be installed at the confluence of Sawpit Gulch Street, Hidden Gulch Street and Pocket Gulch Street and Deadwood Creek. Central City must pursue improving creek erosion control measures which will alleviate possible future infrastructure damage.

Update: Ongoing. During discussions Central City is believed to not have jurisdiction on some of these areas.

Lead Agency: Lawrence County Emergency Management.

Objective: Ongoing upgrade of county warning systems, communications, flood gauges, and emergency notification system including emergency sirens.

Activities: Seek community participation in the planning process. Research communication and warning system needs. Identify any new technology that may enhance warning capability. Participate with Lawrence County on needed flood gauges, and the installation of warning siren system. Continuing partnership with NWS and Weather Radio promotion.

Update: Ongoing. Warning systems updated when needed, also dependent on funding.

Lead Agency: Lead and Deadwood Volunteer Fire Departments.

Objective: Reduce the risk from uncontrolled wildland fire.

Activities: Continue collaboration with all entities that provide fire protection in Central City and Lawrence County. Cooperate with planning and zoning ordinances to help develop survivable space and promote fire resistive building practices. Continue participation in the Firewise Program. Continue hazardous fuels reduction cost-share projects throughout Lawrence County to help reduce the risk of uncontrolled wildfire.

Update: Ongoing. Central City is not designed as Firewise Community. Updates zoning as needed.

Deadwood

Lead Agency: Deadwood Volunteer Fire Department

Objective: Reduce Risk of Wildland Fire.

Activities: Continue collaboration with all entities that provide fire protection in Deadwood and Lawrence County. Cooperate with planning and zoning ordinances to help develop survivable space and promote fire resistive building practices. Continued participation in the Firewise Program. Continue hazardous fuels reduction cost-share projects throughout Lawrence County to help reduce the risk of uncontrolled wildfire. Public engagement and education on wildfire and fire prevention. Continue to maintain and upgrade the water system to provide adequate fire flows.

Update: Ongoing – incorporated into various actions as part of update.

Lead Agency: Lawrence County Emergency Management with City of Deadwood.

Objective: Public Notification Systems

Activities: Research communication and warning system currently in use with high success rates for implementation in Deadwood. Identify any new technology that may enhance warning capability. Continue to bolster partnership with Lawrence County and develop new partnerships to enhance communication between agencies such as the National Weather Service. Work closely with the redevelopment of Deadwood's Main Street which will be in the planning process in 2018. Items to consider: Public Service Announcement capability, traffic control enhancements, fire suppression enhancements, and security camera enhancements.

Update: Parts that related to natural hazards have been incorporated into action items in update. Items pertaining to hazards removed from the previous plan as it relates to security have been removed.

Lead agency: City of Deadwood with Lawrence County Emergency Management.

Objective: Minimize Terrorist threat through training, equipment and planning.

Activities: Seek community support. Identify areas of need within the City. Identify strategy to improve the situation and access resources and funding.

Update: Removed. This hazard was removed with the update.

Lead Agency: City of Deadwood and Deadwood Volunteer Fire Department.

Objective: Improve Community Preparedness through public education on multi-hazard pre-planning for business and home.

Activities: Seek community involvement in the planning process. Identify areas of need in Deadwood. Identify strategies to improve the situation. Identify resources and support for the project.

Update: Education is still included in various actions items, focus on mitigation not preparedness.

Spearfish

Lead Agency: Spearfish Fire Department.

Objective: Reduce the risk from uncontrolled wildland fire.

Activities: Collaborate with all entities that provide fire protection in Spearfish and Lawrence County. Cooperate with planning and zoning ordinances to help develop survivable space and promote fire resistive building practices. Continue participation Lawrence County Pre-Disaster Mitigation Plan Page 69 in the Firewise Program. Continue hazardous fuels reduction cost-share projects throughout Lawrence County to help reduce the risk of uncontrolled wildfire.

Update: Ongoing – incorporated into various actions as part of update.

Lead Agency: Spearfish Police Department along with Lawrence County Emergency Management.

Objective: Ongoing upgrades and enhancements to warning systems including flood gauges, sirens and other warning systems. As the City of Spearfish continues to grow, future warning siren planning will continue and areas that lack coverage will be identified for siren installation.

Activities: The siren system for the City of Spearfish should be evaluated periodically as growth of the City increases and upgrades to the system performed as needed. Continue partnership with National Weather Service and promote Weather Radio purchase and use.

Update: Ongoing. Incorporated into update.

Lead Agency: Spearfish Public Works Department.

Objective: Remove trees and vegetation to Prevent or reduce debris buildup, flash flooding and flood damage on Spearfish Creek, False Bottom Creek, Miller Creek, Hungry Hollow Gulch, Chipmunk Gulch, Higgins Gulch, Riggs gulch, Polo Creek and Ice Box Tributary in Spearfish. Maintain and inspect airport levee and box culvert. Clean box culvert and reestablish flow channel after flood events. Repair low water crossing structures as needed. Add rip rap along Spearfish creek to stabilize bank and prevent erosion. Lower waterline along Colorado Boulevard at False Bottom creek crossing. Install and upsize storm water infrastructure along St Joe to Spearfish Creek. Relocate irrigation diversion structures at Nash street and Hillsvieview to prevent creek breakout flows.

Activities: Apply for a 404 Permit through the Army Corp of Engineers. Communicate with the South Dakota Game Fish & Parks (GFP). Communicate with the Federal Emergency Management Agency (FEMA. mechanisms. City employees keep creek free of debris as part of normal work schedule.

Update: Ongoing. Spearfish is currently working on a Spearfish Creek Preservation Plan. Parks and Rec clear debris as they find it such as dead trees but leaves the root systems to help provide bank stabilization. Other areas were cleaned and maintained as needed. Roughlock Lane – maintained, re riprapped, Yellowstone place project is underway to help address an area of erosion and bank stabilization issues. Jorgensen Park, new riprap/bank stabilization, Colorado Blv sewer line planned for 2025.

Lead Agency: Spearfish Public Works Department along with Lawrence County Emergency Management. Lawrence County Pre-Disaster Mitigation Plan Page 71

Objective: Establish emergency power supply to emergency shelter(s), emergency operations center, public water supply wells and other critical infrastructure within the City of Spearfish.

Activities: Seek possible funding mechanisms to be able to implement study recommendations.

Update: Ongoing – included in updated actions.

Lead Agency: Spearfish Emergency Management Planning Committee along with Lawrence County Emergency Management.

Objective: Improve water flows in Hungry Hollow Gulch and relocation of irrigation intake at St. Joe Street for the City of Spearfish. Channel stabilization and debris removal is done as needed.

Activities: Apply for a 404 Permit through the Army Corp of Engineers. Communicate with the South Dakota Game Fish & Parks (GFP). Communicate with Federal Emergency Management Agency (FEMA). Communicate with property owners. Seek possible funding mechanisms to be able to implement study recommendations. City employees keep creek free of debris as part of normal work schedule.

Update: Ongoing. Coordination with the irrigation company to address issues

Lead Agency: Spearfish Public Works Department along with Lawrence County Emergency Management.

Objective: Replace main wastewater trunk line which crosses under Spearfish Creek located east of Brookview Road for the City of Spearfish.

Activities: Apply for Pre-Disaster Mitigation funds to mitigate hazard. Apply, if necessary, for 404 Permit through the Army Corp of Engineers. Communicate with the South Dakota Game Fish & Parks (GFP). Communicate with the Federal Emergency Management Agency (FEMA). Communicate with property owners. City employees keep creek free of debris as part of normal work schedule.

Update: Ongoing. Coordination with the irrigation company to address issues

Lead Agency: Spearfish Public Works Department along with Lawrence County Emergency Management.

Objective: Replace sewer mains which cross under Spearfish Creek located at Hillview Bridge and the force main from the Yukon lift station for the City of Spearfish. Also replace sewer line from Interstate 90 to the treatment plant.

Activities: Apply, if necessary, for 404 Permit through the Army Corp of Engineers. Communicate with the South Dakota Game Fish & Parks (GFP). Communicate with the Federal Emergency Management Agency (FEMA). Communicate with property owners. City employees keep creek free of debris as part of normal work schedule.

Update: Completed. Tunk line was lined to extend lifespan.

Lead Agency: Spearfish Public Works along with Lawrence County Emergency Management.

Objective: Mitigate loss from flood damage and loss along Spearfish Creek of the following: 10" water main, City Irrigation Intake irrigation main line, Maurice Dam and the Hydro Electric Plant #1 for the City of Spearfish. Provide streambank stabilization to prevent erosion and damage to irrigation supply line. Lower potable waterline in Spearfish Canyon.

Activities: Apply, if necessary, for a 404 Permit through the Army Corp of Engineers. Communicate with the South Dakota Game Fish & Parks (GFP). Communicate with the Federal Emergency Management Agency (FEMA). City employees keep creek free of debris as part of normal work schedule.

Update: Not planned, Sewer line from I90 to treatment plant has been lined to extend lifespan, Not planned.

Lead Agency: City of Spearfish Parks and Recreation Department along with Lawrence County Emergency Management.

Objective: Provide hardened infrastructure in areas of the community identified as most vulnerable to severe weather hazards.

Activities: Apply for applicable Federal, State and private grants; work with the identified areas of the community to develop public-private partnerships to assist with funding.

Update: Ongoing. Incorporated into updated plan.

Lead Agency: City of Spearfish Public Works Department along with Lawrence County Emergency Management.

Objective: Establish emergency fueling capabilities and locations for mission critical assets and personnel to allow for continuity of operations during a hazard/disaster response.

Activities: Apply for applicable Federal and State grants to acquire the necessary funding. City staff will identify and prioritize locations for the emergency fueling stations as well as a process and plan for prioritization of the fuel distribution.

Update: Removed – response and recovery not mitigation.

Lead Agency: City of Spearfish Police Department along with Lawrence County Emergency Management.

Objective: Enhance emergency communication capabilities to provide service/signal to areas of the community that are currently not served by our radio system and enhance our ability to respond to a temporary disruption to our current radio system.

Activities: Apply for applicable Federal and State grants to acquire the necessary funding. City staff will identify and prioritize locations requiring additional service/signal. City staff will identify specifications for a mobile command unit to be deployed during hazard response in signal dead-zones or during the loss of our current communications system.

Update: Removed – response and recovery focused.

Lead

Lead Agency: City of Lead.

Objective: Reduce the risk from uncontrolled wildland fire.

Activities: Continue collaboration with all entities that provide fire protection in Lead and Lawrence County. Cooperate with planning and zoning ordinances to help develop survivable space and promote fire resistive building practices. Continue hazardous fuels reduction cost-share projects throughout Lawrence County to help reduce the risk of uncontrolled wildfire. The City of Lead has an active Facebook presence and operates the Code Red notification system.

Update: Ongoing. Incorporated into update Mitigation Plan, as well as updated Comp Plan.

Lead Agency: Lawrence County Emergency Management with City of Lead. Lawrence County Pre-Disaster Mitigation Plan Page 80

Objective: On-going upgrade of city warning systems, communications, flood gauges and emergency notification systems.

Activities: Seek community participation in the planning process. Research communication and warning system needs; identify any new technology that may enhance warning capability. Continue partnership with National Weather Service and Weather Radio promotion.

Update: Ongoing. Warning systems updated when needed, also dependent on funding.

Lead Agency: City of Lead.

Objective: Improve Community Preparedness.

Activities: Seek community participation in the planning process. Identify community needs. Identify strategy to improve preparedness. Identify resources and support for project.

Update: Removed – preparedness focused not mitigation.

—

Lead Agency: City of Lead.

Objective: Awareness of hazardous materials transported within community.

Activities: Research the anticipated hazardous materials and mode(s) and routes of transportation.

Update: Hazard removed.

Whitewood

Lead Agency: Whitewood Volunteer Fire Department.

Objective: Reduce the risk from uncontrolled wildland fire.

Activities: Continue collaboration with all entities that provide fire protection in Whitewood and Lawrence County. Cooperate with planning and zoning ordinances to help develop survivable space and promote fire resistive building practices. Continue participation in the Firewise Program. Continue hazardous fuels reduction cost-share projects throughout Lawrence County to help reduce the risk of uncontrolled wildfire.

Update: Ongoing – incorporated into various actions as part of update.

—

Lead agency: Lawrence County Emergency Management.

Objective: On-going upgrade of county warning systems, communications and flood gauges.

Activities: Seek community participation in the planning process, research communication and warning system needs. Identify any new technology that enhances warning capability. Participate with Lawrence County on needed flood gauges. Continuing partnership with NWS and Weather Radio promotion.

Update: Ongoing. Dependent on funding availability.

—

Lead Agency: City of Whitewood.

Objective: Replacement of bridge over railroad tracks on Meade Street.

Activities: Seek community participation in the planning process and research potential funding measures. Seeking support for the bridge replacement from the State and county.

Update: Completed. Bridge has been removed.

Appendix F
Adoption Resolutions

Resolution _____

**A Resolution of the Lawrence County Board of Commissioners Declaring Support and
Adoption of the Lawrence County Natural Hazard Mitigation Plan, 2025**

WHEREAS, Lawrence County Board of Commissioners supports the contents of the Lawrence County Natural Hazard Mitigation Plan, 2025; and

WHEREAS, the Lawrence County Natural Hazard Mitigation Plan, 2025 will be utilized as a guide for planning related to FEMA Hazard Mitigation and other purposes as deemed appropriate by the Lawrence County Board of Commissioners.

NOW THEREFORE IT BE RESOLVED, that the Lawrence County Board of Commissioners hereby adopts, supports, and will facilitate the Lawrence County Natural Hazard Mitigation Plan, 2025 implementation.

Adopted by Lawrence County this _____ day of _____, 2025

Bob Ewing, Chairman

Attested:

Brenda McGruger, Auditor

Resolution _____

**A Resolution of the Central City Board of Trustees Declaring Support and Adoption of the
Lawrence County Natural Hazard Mitigation Plan, 2025**

WHEREAS, the Central City Board of Trustees supports the contents of the Lawrence County Natural Hazard Mitigation Plan, 2025; and

WHEREAS, the Lawrence County Natural Hazard Mitigation Plan, 2025 will be utilized as a guide for planning related to FEMA Hazard Mitigation and other purposes as deemed appropriate by the Central City Board of Trustees.

NOW THEREFORE IT BE RESOLVED, that the Central City Board of Trustees hereby adopts, supports, and will facilitate the Lawrence County Natural Hazard Mitigation Plan, 2025 implementation.

Adopted by Central City this _____ day of _____, 2025

Donovan Renner, President

Attested:

Shelly Bennett, Finance Officer

Resolution _____

**A Resolution of the Deadwood City Commission Declaring Support and Adoption of the
Lawrence County Natural Hazard Mitigation Plan, 2025**

WHEREAS, the Deadwood City Commission supports the contents of the Lawrence County Natural Hazard Mitigation Plan, 2025; and

WHEREAS, the Lawrence County Natural Hazard Mitigation Plan, 2025 will be utilized as a guide for planning related to FEMA Hazard Mitigation and other purposes as deemed appropriate by the Deadwood City Commission.

NOW THEREFORE IT BE RESOLVED, that the Deadwood City Commission hereby adopts, supports, and will facilitate the Lawrence County Natural Hazard Mitigation Plan, 2025 implementation.

Adopted by Deadwood this _____ day of _____, 2025

Dave Ruth Jr., Mayor

Attested:

Jessica McKeown, Finance Officer

Resolution _____

A Resolution of the Lead City Commission Declaring Support and Adoption of the Lawrence County Natural Hazard Mitigation Plan, 2025

WHEREAS, the Lead City Commission supports the contents of the Lawrence County Natural Hazard Mitigation Plan, 2025; and

WHEREAS, the Lawrence County Natural Hazard Mitigation Plan, 2025 will be utilized as a guide for planning related to FEMA Hazard Mitigation and other purposes as deemed appropriate by the Lead City Commission.

NOW THEREFORE IT BE RESOLVED, that the Lead City Commission hereby adopts, supports, and will facilitate the Lawrence County Natural Hazard Mitigation Plan, 2025 implementation.

Adopted by Lead this _____ day of _____, 2025

Ron Everett, Mayor

Attested:

Billie Jo Inhofer, Finance Officer

Resolution _____

A Resolution of the Spearfish City Council Declaring Support and Adoption of the Lawrence County Natural Hazard Mitigation Plan, 2025

WHEREAS, the Spearfish City Council supports the contents of the Lawrence County Natural Hazard Mitigation Plan, 2025; and

WHEREAS, the Lawrence County Natural Hazard Mitigation Plan, 2025 will be utilized as a guide for planning related to FEMA Hazard Mitigation and other purposes as deemed appropriate by the Spearfish City Council.

NOW THEREFORE IT BE RESOLVED, that the Spearfish City Council hereby adopts, supports, and will facilitate the Lawrence County Natural Hazard Mitigation Plan, 2025 implementation.

Adopted by Spearfish this _____ day of _____, 2025

John Senden, Mayor

Attested:

Bobby Falcon, Finance Officer

Resolution _____

A Resolution of the Whitewood City Council Declaring Support and Adoption of the Lawrence County Natural Hazard Mitigation Plan, 2025

WHEREAS, the Whitewood City Council supports the contents of the Lawrence County Natural Hazard Mitigation Plan, 2025; and

WHEREAS, the Lawrence County Natural Hazard Mitigation Plan, 2025 will be utilized as a guide for planning related to FEMA Hazard Mitigation and other purposes as deemed appropriate by the Whitewood City Council.

NOW THEREFORE IT BE RESOLVED, that the Whitewood City Council hereby adopts, supports, and will facilitate the Lawrence County Natural Hazard Mitigation Plan, 2025 implementation.

Adopted by Spearfish this _____ day of _____, 2025

Mitch Harmon, Mayor

Attested:

Cory Heckenlaible, Finance Officer