Burleigh County
Multi-Hazard Mitigation Plan

Draft

FEMA Approved: Pending

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Introduction

The Burleigh County Multi-Hazard Mitigation Plan (MHMP) is an update of the County's 2020 Multi-Hazard Mitigation Plan. Hazard mitigation plans are required by the Federal Emergency Management Agency (FEMA) to be updated every five years to maintain eligibility for grant funding. The plan is not necessarily limited to Federal, State, or locally declared disasters or emergencies; any time incidents occur that produce an opportunity for mitigation actions; they will be developed and incorporated into the Burleigh County Multi-Hazard Mitigation Plan.

Purpose: Reduce the vulnerability of potential harm to life, information, operations, environment, and/or property in Burleigh County from the impacts of natural, technological, or human-caused occurrences.

Authority: The Burleigh County Multi-Hazard Mitigation Plan has been prepared in accordance with federal laws, including:

Laws
Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended
National Flood Insurance Act of 1968, as amended
National Dam Safety Program Act (Pub. L. 92-367), as amended

Regulations
44 CFR Part 201 Mitigation Planning
44 CFR, Part 60, Subpart A, including § 60.3 Flood plain management criteria for flood-prone areas
44 CFR Part 77 Flood Mitigation Grants
44 CFR Part 206 Subpart N. Hazard Mitigation Grant Program

Section 322 of the Disaster Mitigation Act of 2000 requires each mitigation plan developed by a local government shall:
(1) describe actions to mitigate hazards, risks, and vulnerabilities identified under the plan; and
(2) establish a strategy to implement those actions.

The North Dakota Century Code 37-17.1-07 (Local or regional emergency management organizations.) states that "Each local or regional emergency management organization shall prepare and keep current a local disaster or emergency operational plan for its area." Burleigh County and incorporated cities consider the Mitigation Plan an integral part of the Burleigh County Emergency Management Program.

Planning Process

The planning process included the following activities:

- Public Input Survey
- Public Meetings
- Meetings with jurisdictions (review data, risk assessment, and mitigation actions)
- Jurisdictional review of proposed MHMP

Additional emails and conversations were completed via phone and email to complete the final draft. Throughout the process, research was completed along with data gathering and outreach (phone calls, meetings, and/or emails) to regulatory agencies and other governmental entities (US Army Corps of Engineers, ND Department of Water Resources, Burleigh County Water Resource Board, ND Forest Service, ND Fire Marshal's Office, US National Weather Service).

Planning Team Members

Jurisdiction	Contact	Title	Agency
Burleigh County	Mary Senger	Emergency Manager	Burleigh County Emergency Mgt
Burleigh County	Brian Bitner	Chair	Burleigh County Commission
Burleigh County	Mitch Flanagan	Building Official, Floodplain Administrator	Burleigh Building/Planning/Zoning
Burleigh County	Greg Carlson	GIS Coordinator	Burleigh County Highway Dept
Burleigh County	Marcus Hall	Engineer	Burleigh County Highway Dept
Burleigh County	Kelly Leben	Sheriff	Burleigh County Sheriff's Dept
Burleigh County	Dustin Theurer	Chief	Bismarck Rural Fire Dept
Burleigh County	Renae Moch	Director	Bismarck/Burleigh Public Health
Burleigh County	Crystalynn Kuntz	Emergency Preparedness Coord	Bismarck/Burleigh Public Health
City of Lincoln	Keli Berglund	Mayor	City of Lincoln
City of Lincoln	Matt Giddings	Chief	City of Lincoln Police Department
City of Lincoln	Terry Schutt	Director	City of Lincoln Public Works
City of Lincoln	Tonya Wilson	Auditor	City of Lincoln
City of Regan	Marvin Gillig	Mayor	City of Regan
City of Regan	Kelly Bauer	Auditor	City of Regan
City of Wilton	LeeAnn Domonoske-Keller	Mayor	City of Wilton
City of Wilton	Marlin Schaaf	Chief	City of Wilton Fire Dept
City of Wilton	Dean Larson	Supervisor	City of Wilton Public Works
City of Wing	Julie Hein	Mayor	City of Wing
City of Wing	Frank Hein	Chief	City of Wing Fire Dept
City of Wing	Kobe Bryant	Department Head	City of Wing Public Works

Multi-hazard mitigation planning is a continuous process whereby risk analyses, updating the situation assessment, research, coordinating, disaster response or other activities are occurring simultaneously.

The goal is to maintain the Burleigh County Hazard Mitigation Plan and obtain federal approval every five years. The original plan was developed in 2003 and subsequently updated in 2009, 2015, and 2020. The current plan update process began in 2024 with the Emergency Manager collecting data and soliciting technical advice and guidance from the ND Department of Emergency Services' Mitigation Division prior to the beginning of the official update plan process. In addition, throughout 2025, the Emergency Manager hosted and/or attended public meetings to revisit the current Multi-Hazard Mitigation Plan and incorporate information where applicable.

11-19-24 Annual, publicized, Local Emergency Planning Committee Meeting with agenda item to discuss the Multi-Hazard Mitigation Plan (update process, mitigation projects, grant opportunities). Also discussed the "Shelter in Place" brochure and the "Every Season to Prepare" pamphlet; both items are included as ongoing mitigation projects to promote community preparedness and response to hazards in Burleigh County. An adequate supply of both items is maintained through Emergency Management and other stakeholders as well as being available throughout the community and the Burleigh County website.

02-26-25 Multi-Hazard Mitigation Plan planning meeting with Department Heads.

03-20-25
Thru
04-10-25 Burleigh County Emergency Management published an electronic survey to gather input from the public. Questions were selected to make the experience brief while soliciting hazard vulnerability as well as public's view of the most likely community hazards. Open-ended responses were also included to collect responses the community felt relative to the survey and hazards. A total of 90 responses were received. The survey was emailed to area stakeholders, community responders, and contiguous counties. Results and information captured were compared to the risks analysis and closely aligned. Additionally, information received was factored into the mitigation projects. See Appendix C: Burleigh County Public Survey. The survey was publicly advertised: Radio, Television, The Bismarck Tribune, Burleigh County website, Burleigh County social media, City of Bismarck website, City of Bismarck social media, and Dakota Media Access.

03-25-25 Flood Annex Update; reviewed map updates and mitigation projects (status updates as well as new projects) and posted on the Burleigh County website.

04-09-25 A regular, publicized, meeting of the Burleigh County Water Resource District with an agenda item for the Emergency Manager to discuss the Multi-Hazard Mitigation Plan process, survey, and solicit projects from the district.

05-14-25 A regular, publicized, meeting of the Burleigh County Water Resource District with an agenda item for the Emergency Manager to discuss the Multi-Hazard Mitigation Plan process, survey, and solicit projects from the district.

05-19-25 Draft Mitigation Plan published on the website.

06-18-25 A regular, publicized, meeting of the Burleigh County Water Resource District with an agenda item for the Emergency Manager to discuss the Multi-Hazard Mitigation Plan process, survey, and solicit projects from the district.

07-16-25 A regular, publicized, meeting of the Burleigh County Water Resource District with an agenda item for the Emergency Manager to discuss the Multi-Hazard Mitigation Plan process, survey, and solicit projects from the district.

08-11-25 The Emergency Manager scheduled a meeting with the City of Wing to review the current draft of the Mitigation Plan. Mitigation projects and priorities were discussed along with the opportunity to add projects at any time. Discussed generator needs for multiple sites, snow fencing via tree row planting, and an addition to the fire hall.

08-13-25 A regular, publicized, meeting of the Burleigh County Water Resource District with an agenda item for the Emergency Manager to discuss the Multi-Hazard Mitigation Plan process, survey, and solicit projects from the district.

08-20-25 Meeting with Burleigh County fire departments to discuss burn procedures, staffing and capabilities, radios, wildland urban interface, and mitigation projects.

08-25-25 Meeting with Michael Gunsch, Houston Engineering, contracted through the Burleigh County Water Resource District. Reviewed the Flood Annex, Multi-Hazard Mitigation Plan and projects, and the McDowell Dam Emergency Action Plan.

08-29-25 The Emergency Manager scheduled a meeting with the City of Wilton to review the current draft of the Mitigation Plan. Mitigation projects and priorities were discussed along with the opportunity to add projects at any time. Discussed generator need for Public Works which is collocated with City Hall.

09-03-25 KLOVE Radio Interview (Closer Look) – Preparedness, CodeRed, CERT, LEPC, Emergency Operations Plan, Mitigation Plan, ready.gov (https://www.klove.com/news/closer-look/hottopx/local-closer-look-burleigh-county-emergency-management-11646). Interview will replay several times.

09-19-25 The Emergency Manager scheduled a meeting with the City Regan to review the current draft of the Mitigation Plan. Mitigation projects and priorities were discussed along with the opportunity to add projects at any time. No more elevator and City is fed by South Central Water.

10-10-25 The Emergency Manager scheduled a meeting with the City of Lincoln to review the current draft of the Mitigation Plan and Emergency Operations Plan. Mitigation projects and priorities were discussed along with the opportunity to add projects at any time.

10-29-25 Multi-Hazard Mitigation Plan planning meeting with Department Heads.

11-02-25 Final draft (available via website) provided to stakeholders to review and provide comment.

11-17-25 Mitigation Plan presentation and adoption at the Burleigh County Commission Meeting and advertised through a variety of media.

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Participating Jurisdictions

Jurisdictions Located within Burleigh County	Jurisdictions Asked to Participate in the Plan	Jurisdictions Represented in the Plan	Participation Status
Burleigh County	Burleigh County	Burleigh County	Continuing Participation (2003, 2008, 2014, 2020, 2025)
City of Bismarck	City of Bismarck	City of Bismarck	*Continuing Participation (2003, 2008, 2014, 2020, 2025)
City of Lincoln	City of Lincoln	City of Lincoln	Continuing Participation (2003, 2008, 2014, 2020, 2025)
City of Regan	City of Regan	City of Regan	Continuing Participation (2003, 2008, 2014, 2020, 2025)
City of Wilton	City of Wilton	City of Wilton	Continuing Participation (2003, 2008, 2014, 2020, 2025)
City of Wing	City of Wing	City of Wing	Continuing Participation (2003, 2008, 2014, 2020, 2025)

*The City of Bismarck develops an independent Mitigation Plan for their jurisdiction; therefore, they are not an official jurisdiction adopting the Burleigh County Plan. They did participate in the Burleigh County plan development.

Outreach to contiguous counties was accomplished through phone, meeting invites, and online survey invitation.

Adoption Resolutions

Burleigh County

Burleigh County
221 N 5th St
Bismarck ND 58501
701.222.6718 | burleigh.gov

2025 Burleigh County Multi-Hazard Mitigation Plan

Whereas Burleigh County recognizes the threat that natural, man-made or technological hazards pose to people and property within Burleigh County; and

Whereas Burleigh County has prepared the 2025 "Burleigh County Multi-Hazard Mitigation Plan" in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

Whereas the 2025 "Burleigh County Multi-Hazard Mitigation Plan" identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Burleigh County from the impacts of future hazards and disasters; and

Whereas adoption by Burleigh County demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2025 "Burleigh County Multi-Hazard Mitigation Plan".

Now, therefore, be it resolved, by the Burleigh County Commission, North Dakota, that:

The Burleigh County Commission adopts the 2025 "Burleigh County Multi-Hazard Mitigation Plan". While content related to Burleigh County may require revisions to meet the plan approval requirements, changes occurring after adoption will not require Burleigh County to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

Signed this 17th day of November 2025

Brian Bitner, Chairperson
Burleigh County Commission

City of Lincoln

2025 Burleigh County Multi-Hazard Mitigation Plan

Whereas the City of Lincoln recognizes the threat that natural, man-made or technological hazards pose to people and property within the City of Lincoln; and

Whereas Burleigh County has prepared the 2025 "Burleigh County Multi-Hazard Mitigation Plan" in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

Whereas the 2025 "Burleigh County Multi-Hazard Mitigation Plan" identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Lincoln from the impacts of future hazards and disasters; and

Whereas adoption by the City of Lincoln demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2025 "Burleigh County Multi-Hazard Mitigation Plan".

Now, therefore, be it resolved, by the City of Lincoln, North Dakota, that:

The City of Lincoln Commission adopts the 2025 "Burleigh County Multi-Hazard Mitigation Plan". While content related to the City of Lincoln may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the City of Lincoln to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

Signed this 6th day of November, 2025

Keli Berglund

Keli Berglund, Mayor
City of Lincoln Commission

City of Regan

2025 Burleigh County Multi-Hazard Mitigation Plan

Whereas the City of Regan recognizes the threat that natural, man-made or technological hazards pose to people and property within the City of Regan; and

Whereas Burleigh County has prepared the 2025 "Burleigh County Multi-Hazard Mitigation Plan" in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

Whereas the 2025 "Burleigh County Multi-Hazard Mitigation Plan" identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Regan from the impacts of future hazards and disasters; and

Whereas adoption by the City of Regan demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2025 "Burleigh County Multi-Hazard Mitigation Plan".

Now, therefore, be it resolved, by the City of Regan, North Dakota, that:

The City of Regan Commission adopts the 2025 "Burleigh County Multi-Hazard Mitigation Plan". While content related to the City of Regan may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the City of Regan to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

Signed this 5 day of November, 2025

Marvin Gillig, Mayor
City of Regan Commission

City of Wilton

2025 Burleigh County Multi-Hazard Mitigation Plan

Whereas the City of Wilton recognizes the threat that natural, man-made or technological hazards pose to people and property within the City of Wilton; and

Whereas Burleigh County has prepared the 2025 "Burleigh County Multi-Hazard Mitigation Plan" in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

Whereas the 2025 "Burleigh County Multi-Hazard Mitigation Plan" identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Wilton from the impacts of future hazards and disasters; and

Whereas adoption by the City of Wilton demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2025 "Burleigh County Multi-Hazard Mitigation Plan".

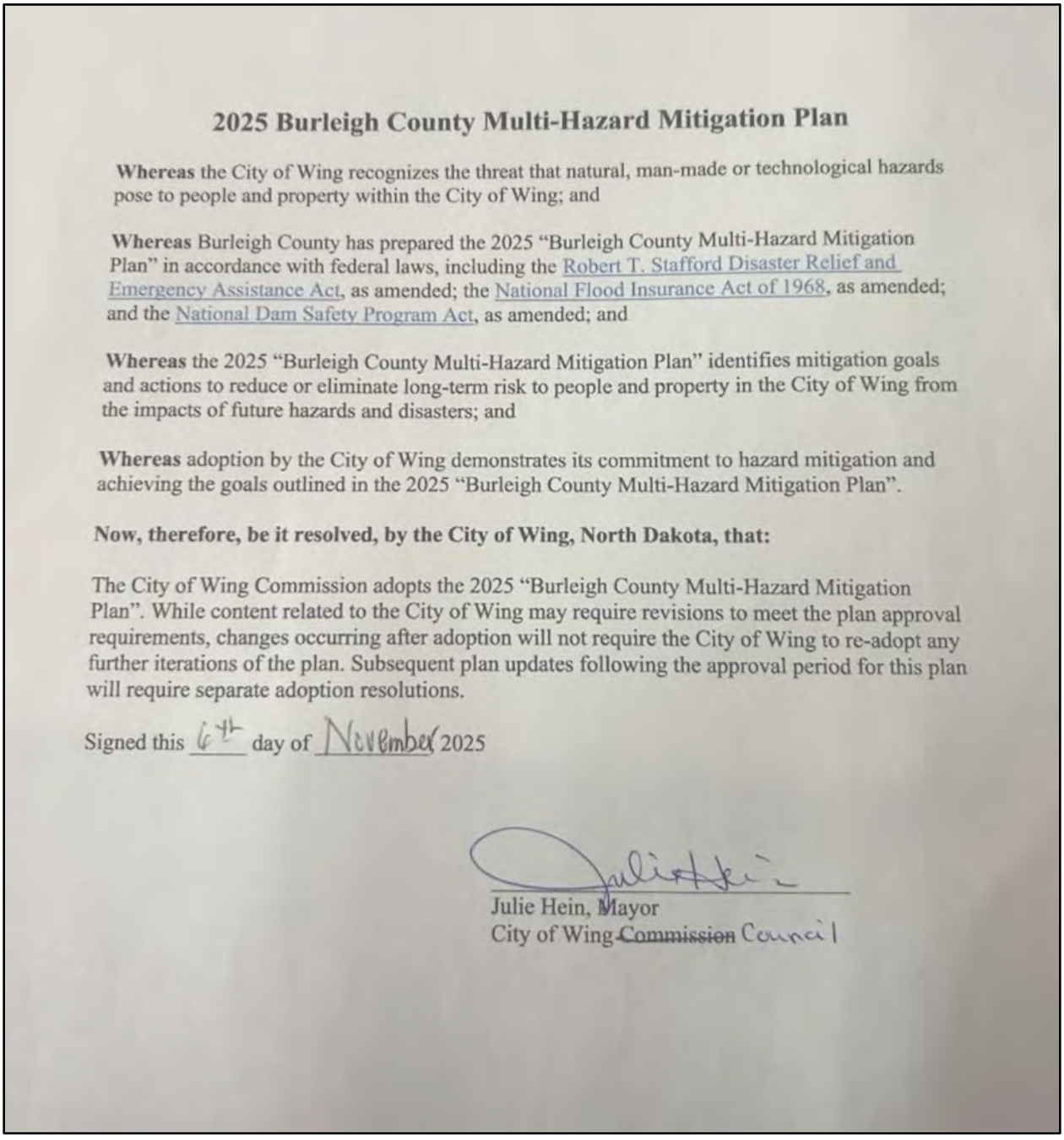
Now, therefore, be it resolved, by the City of Wilton, North Dakota, that:

The City of Wilton Commission adopts the 2025 "Burleigh County Multi-Hazard Mitigation Plan". While content related to the City of Wilton may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the City of Wilton to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

Signed this 5 day of Nov, 2025

LeeAnn Domonoske-Kellar, Mayor
City of Wilton Commission

City of Wing



2025 Burleigh County Multi-Hazard Mitigation Plan

Whereas the City of Wing recognizes the threat that natural, man-made or technological hazards pose to people and property within the City of Wing; and

Whereas Burleigh County has prepared the 2025 "Burleigh County Multi-Hazard Mitigation Plan" in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

Whereas the 2025 "Burleigh County Multi-Hazard Mitigation Plan" identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Wing from the impacts of future hazards and disasters; and

Whereas adoption by the City of Wing demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2025 "Burleigh County Multi-Hazard Mitigation Plan".

Now, therefore, be it resolved, by the City of Wing, North Dakota, that:

The City of Wing Commission adopts the 2025 "Burleigh County Multi-Hazard Mitigation Plan". While content related to the City of Wing may require revisions to meet the plan approval requirements, changes occurring after adoption will not require the City of Wing to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

Signed this 6th day of November 2025

Julie Hein, Mayor
City of Wing ~~Commission~~ Council

Existing Plans, Studies, Reports, and Technical Information

The Burleigh County Multi-Hazard Mitigation Plan was developed in coordination with local, state, and federal agencies, non-profit organizations, local businesses, schools, and the public. The Cities of Lincoln, Regan, Wing and Wilton support county-led planning initiatives. Additionally, the Planning Team will continue to ensure the Mitigation Plan informs the plans and programs listed below by incorporating risk assessment data and mitigation actions.

Agency	Plans and Programs
American Red Cross (West Dakota)	• Shelter • Mass Care • Windshield Damage Assessment • Disaster Recovery
Bismarck Community Development	• Plat Reviews
Bismarck/Burleigh Public Health	• Shelters • Community Education • Vulnerable Populations
Burleigh County Auditor	• Fiscal Management • Emergency Reserve Fund
Burleigh County Board of Health	• Public Health Programs
Burleigh County Building/Planning/Zoning	• Development • Floodplain Administration • Inspections • Planning
Burleigh County Comprehensive Plan	• Development • Planning
Burleigh County Commission	• Disaster/Emergency Declarations • Budget Allocations • County Ordinances
Burleigh County Community Wildfire Protection Plan	• Fuel Loads • Mitigation Projects
Burleigh County Emergency Management	• Local Emergency Operations Plan • Multi-Hazard Mitigation Plan • Evacuation Annex • Shelter Annex • Mass Care Annex • Public Information Officer • Social Media Coordinator • Website Administrator • Disaster Recovery • Local Emergency Planning Committee • Grants Coordination • Emergency Notification

Agency	Plans and Programs
Burleigh County Emergency Management	• Local Emergency Operations Plan • Multi-Hazard Mitigation Plan • Evacuation Annex • Shelter Annex • Mass Care Annex • Public Information Officer • Social Media Coordinator • Website Administrator • Disaster Recovery • Local Emergency Planning Committee • Grants Coordination • Emergency Notification
Burleigh County Extension Service	• Animal Health • Plant Health • Community Education
Burleigh County GIS	• Hazard Mapping • Online (public) Flood and Elevation Mapping Tool
Burleigh County Highway Department	• Primary Routes • Bridges • Debris Removal • Self-Fill Sandbag Sites
Burleigh County Local Emergency Planning Committee	• Tier II Reporting • Community Education • Planning and Training
Burleigh County Multi-Hazard Mitigation Plan	• Reviewed and updated • Mitigation projects reviewed for status • Mitigation projects developed
Burleigh County Schools	• Curriculum Standards (safety drills)
Burleigh County School Superintendent	• Curriculum Standards (safety drills)
Burleigh County Sheriff's Department	• Traffic Control and Safety • Evacuation Routes • Emergency Notification
Burleigh County Snowmobile CERT	• Alternate Transportation • Safety Checks • Planning and Training
Burleigh County State's Attorney	• Legal Review
Burleigh County Water Resource Board	• Permitted Uses • Planning Commission • Flood Protection Projects

Agency	Plans and Programs
Burleigh County Zoning Ordinance	• Floodplain Management • South Central Regional Water Project • Missouri River Joint Water Resource • ND Flood Risk Management Study
Central Dakota Amateur Radio Club	• Alternate Communications • Weather Spotters
Central Dakota Communications Center (9-1-1)	• Alert and Warning • Communications • Emergency/Disaster Procedures
Crisis Care Chaplaincy	• Mental Health • Disaster Recovery
Lewis and Clark Regional Development Council	• Comprehensive Economic Development Strategy
Lincoln City Attorney	• Legal Review
Lincoln City Commission	• Disaster/Emergency Declarations • Budget Allocations • Building and Inspections • Capital Improvement Plan (under development) • City Ordinances • Comprehensive Plan • Planning and Zoning Commission
Metropolitan Planning Organization	• Hazardous Materials Route Mapping (In Progress) • Transportation Routes • Planning
National Climatic Data Center (NCDC	• Weather Event Statistics
National Fire and Incident Reporting System (NFIRS)	• Fire Incident Statistics
ND Department of Agriculture	• Plant and Animal Statistics
ND Department of Emergency Services	• Enhanced Multi-Hazard Mitigation Plan • Review • Technical Assistance
ND Department of Health	• Disease Statistics
ND Department of Transportation	• Traffic Statistics
ND Forest Service	• Fire Incident Statistics
ND Pipeline Association	• Maps • Education/Training • Planning and Zoning
ND Water Resources	• Dam Inventory • NFIP Data • Water Basin Data

Agency	Plans and Programs
Regan City Commission	• Disaster/Emergency Declarations • Budget Allocations • City Ordinances
Salvation Army	• Canteen (mobile feeding) • Shelter • Mass Care • Windshield Damage Assessment • Disaster Recovery
South Central Regional Water	• Rural Water • Planning
Southwest Central Emergency Preparedness	• Points of Distribution • Mass Inoculation • SWC Regional Strategic National Stockpile • SWC Regional EOP Mental Health • SWC Regional EOP Pandemic Influenza • SWC Regional EOP Mass Fatality
US Army Corps of Engineers	• Planning Assistance (Section 22)
US Census	• Demographics • Population Estimates
US Drought Monitor	• Drought Statistics • Maps
US Geological Survey	• Creek/River Gages
US National Weather Service	• Hazard Advisories • Outlooks • Statistics • Weather Advisories
Wilton City Commission	• Disaster/Emergency Declarations • Budget Allocations • City Ordinances • Planning and Zoning Board
Wing City Commission	• Disaster/Emergency Declarations • Budget Allocations • City Ordinances

The American Red Cross includes the shelter information provided by Burleigh County Emergency Management within their National Shelter System.

The Burleigh County Commission and Burleigh County Highway Department utilize the mitigation projects as appropriate when developing future budgets and road priorities.

Flood mitigation projects are closely tied to the Burleigh County Water Resource Board and their continuing discussions as well as the Burleigh County Flood Annex. The Burleigh County Zoning Floodplain Ordinance is evaluated and based on NFIP guidelines.

Information from the 2020 Mitigation Plan and actions were integrated into generator grant requests for Bismarck Rural Fire, City of Wilton, City of Lincoln, and the Burleigh County Sheriff's Department. Information from the 2020 Mitigation Plan was also considered when updating the 2025 Burleigh County Flood Annex. Risk assessment and capabilities for all jurisdictions is considered during updates of the Burleigh County Emergency Operations Plan.

Communicable Disease activities parallel the Southwest Central Emergency Preparedness planning efforts.

The US National Weather Service (Bismarck Office) remains in close contact with Burleigh County Emergency Management and Skywarn Spotters to "truth" forecasts and/or impacts.

Burleigh County is pursuing participation in the Community Rating System which was not influenced by this plan as much as reducing insurance rates.

Other integrations that correlate, not primarily based on this plan, are based on established rules, regulations and/or codes.

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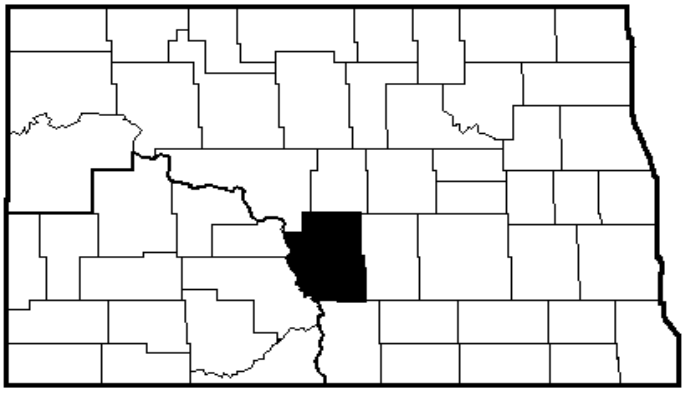
Community Profile

Burleigh County is in south-central North Dakota with five incorporated cities including the county seat, Bismarck, and the Missouri River as the western boundary.



City	Population
Burleigh County	98,458
Bismarck	75,092
Lincoln	4,257
Regan	35
Wilton	718
Wing	132

Source: US Census Bureau 2020 Census

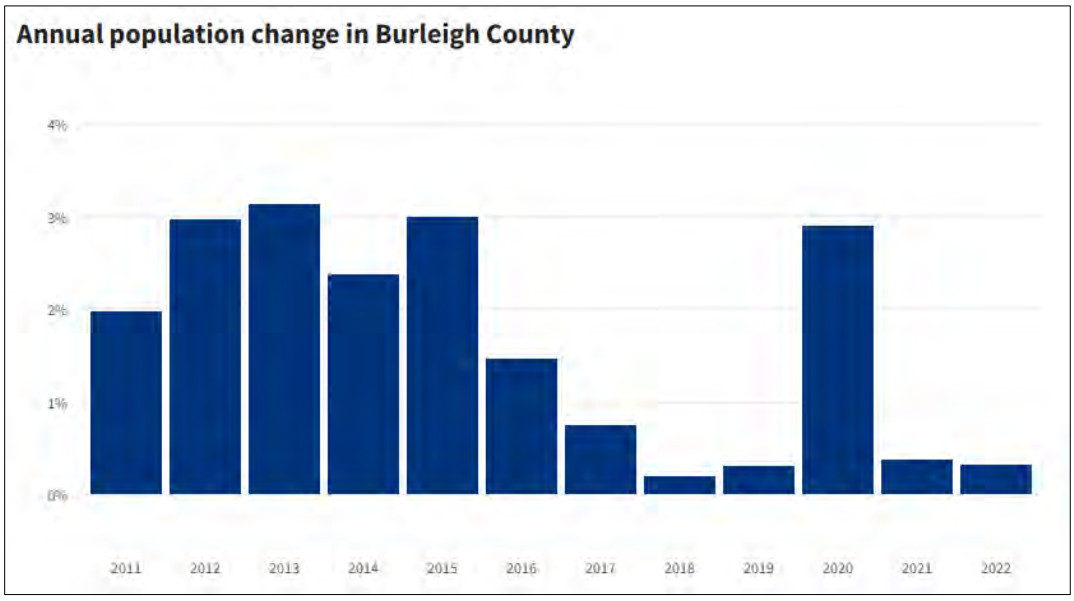
Burleigh County has 1,632.7 square miles of land area and is the 13th largest county in North Dakota by total area with a population of 98,458 (US Census Bureau). Residential and commercial development is concentrated in the incorporated areas of Burleigh County with the largest, single concentration occurring in and around the City of Bismarck.

Burleigh County is on the western side of the continental divide and drains through the Missouri River drainage system.

Rivers
Missouri River, Apple Creek, Burnt Creek, and Hay Creek

Demographics

The 2024 population estimate is 103,107; a 4.7% increase from the 2020 population of 98,458.



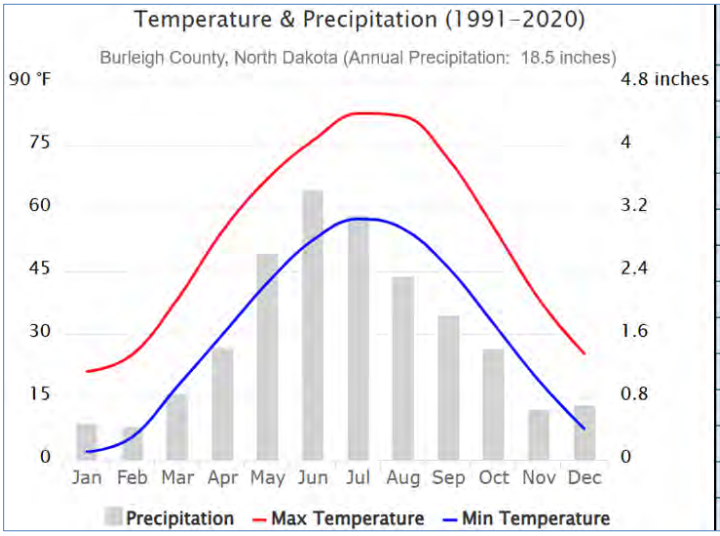
Source: US Census Bureau

Climate

General Climate Type - Continental. Temperature and precipitation are the two parameters traditionally used to describe general, large-scale climate types.

Temperature. The Northern Great Plains (NGP) region in general and South-central North Dakota (Burleigh County) in particular, has an extreme continental climate characterized by a very high annual variation in temperature (warm summers and cold winters) and a high daily range in temperatures, as compared to maritime climates. These high ranges in temperature are mainly due to the area's location: in the mid-north latitudes (between 45.935° and 49.00 ° N), along the north border of the continental United States, centered in the North American Continent, and far from the modifying effect of oceans.

Precipitation. Moisture is a second key component of climate, with North Dakota effectively straddling "the transition from the moist eastern United States and the semiarid West" (Frankson, 2022). A high daily range in temperature is primarily due to the lower heat capacity of dry air and dry soils as compared to humid air and either moist soils or large bodies of water, so that dryer air and dryer soil will both warm and cool at a faster rate than wetter air or soil (Wikipedia: Climate of ND, 2023).

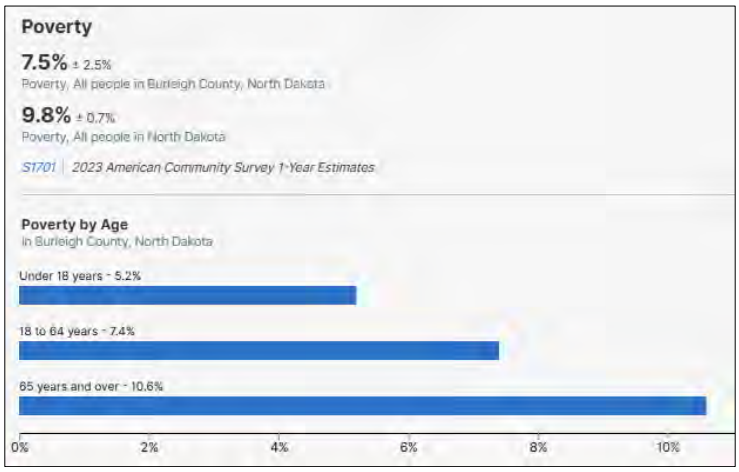


Month	Pcpn(in.) Normal	Tmax(F) Normal	Tmin(F) Normal	Tavg(F) Normal
Jan	0.4	20.9	1.7	11.3
Feb	0.36	24.9	5.2	15.1
Mar	0.78	38.1	17.4	27.8
Apr	1.36	54.4	29.7	42.1
May	2.58	66.9	42.1	54.5
Jun	3.37	75.9	52.2	64.1
Jul	3.05	82.4	57.2	69.8
Aug	2.27	81.8	54.9	68.4
Sep	1.78	71.5	45.6	58.6
Oct	1.35	55.2	32.2	43.7
Nov	0.64	38.1	18.7	28.4
Dec	0.57	25.2	7.2	16.2
Annual	18.51	52.9	30.3	41.6

The figure above shows the average monthly precipitation and the range of monthly average high and low temperatures for the Burleigh County area during the most recent 30-year climate normal period, 1991-2020 (XM-ACIS, 2025; Climate Toolbox, 2024).

Economy

The largest percentage of population (23.8%) is employed in “Educational services, and health care and social assistance”, median household income was $85,172, with poverty at 7.5%.
Source: US Census Bureau 2023 American Community Survey

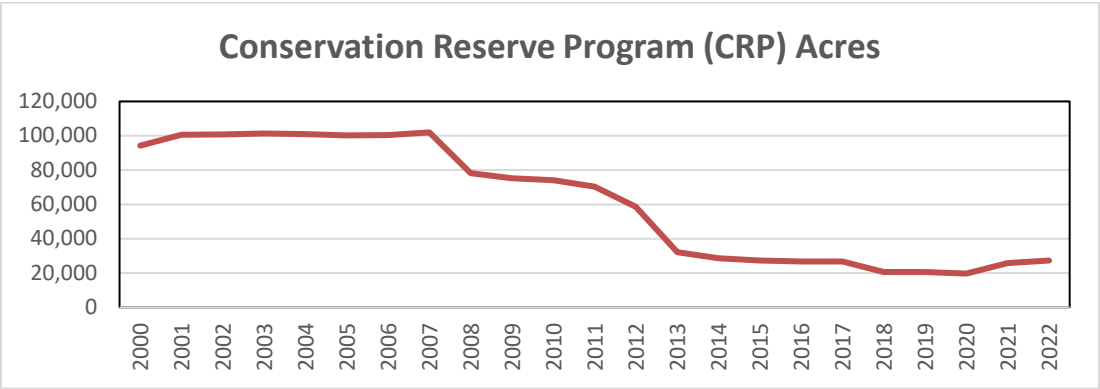


Source: US Census Bureau 2023 American Community Survey

Land Use Concerns

The primary landscape of Burleigh County, 73%, is equally split between rolling pasturelands and croplands, with less than 7% developed as residential or commercial property. The remaining 20% is composed of rolling prairie, wetlands, small lakes, and federal or state wildlife management areas (USDA, 2022; Stout, 1974). Woodlands make up less than 1% of the landscape in the county, primarily as homestead shelterbelts or urban plantings (Claeys, 2020).

There were 709 farms in 2022 (10% decrease from 2017) averaging 1,103 acres per farm. (Source: USDA Census of Agriculture) Soil erosion due to wind and water remains a problem. On steep gradients, rain washes out gullies in cultivated fields, and fields cultivated in the fall suffer wind damage. Acreage (27,264) in the 2022 Conservation Reserve Program helped mitigate some erosion.



Data Source: US Department of Agriculture, Farm Service Agency

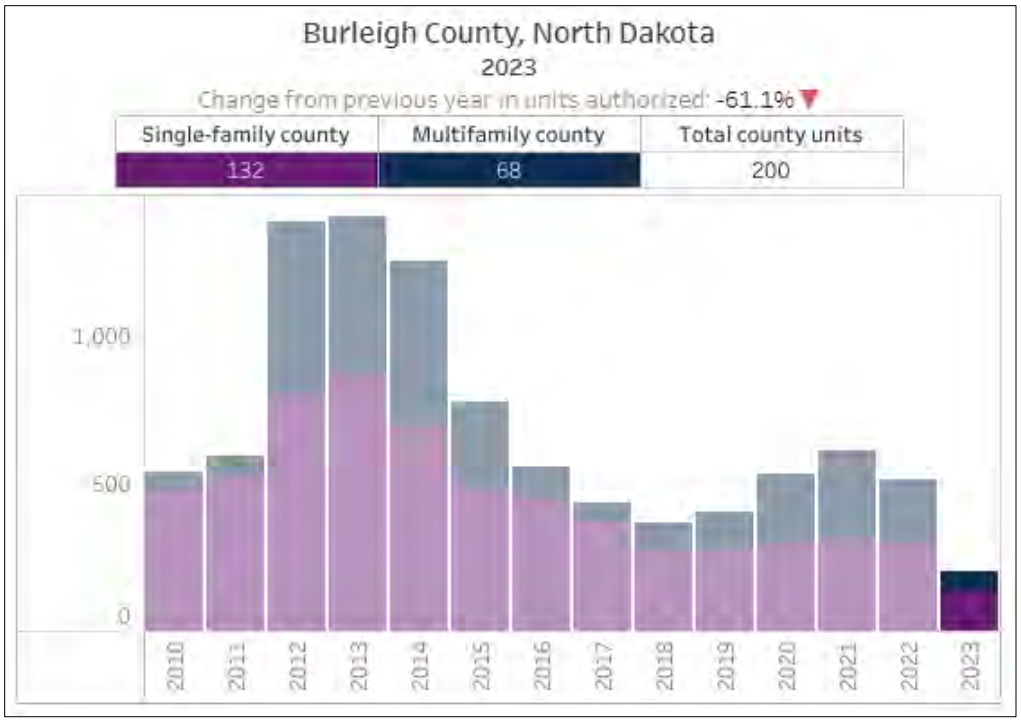
Burleigh County continues to study a variety of mitigation activities. Soil erosion, water supply, and water quality are concerns of the county.

The Burleigh County floodplain ordinance was last updated in 2024: Additionally, the Burleigh County Water Resource District utilizes previous flood event data when considering flood control projects and includes non-structural project recommendations such as amending floodplain ordinances in direct correlation with National Flood Insurance Program recommendations and FEMA's flood insurance rate map data.

Development

A map showing development in Burleigh County for the past five years show the majority of development within 2-4-miles around the City of Bismarck. Effects on local response is the potential of increased calls as well as increased road mileage for snow and potential debris removal. Development is also vulnerable to rural fires. The City of Lincoln has also seen increased development and annexed the mobile home community east of 66th Street Southeast. The mobile home community will increase response activities and raise concerns during high-wind events, while the rest of the development could increase response calls. Regan, Wilton, and Wing have not had any significant developments.

The Bismarck Mandan Chamber EDC and local jurisdictions promote and encourage opportunities for the area as a destination to live, work, and play.
The ND oil boom peaked in 2012-2013 which resulted in increased population and development.
(Source: US Census Bureau)



Risk Assessment

The 15 hazards identified by the ND Department of Emergency Services were utilized for the risk assessment. (Source: ND Enhanced Mitigation Mission Area Operations Plan, 2024-2029)

Natural Hazards	Technological Hazards	Human-Caused Incidents
Drought	Dam Failure	Civil Disturbance
Flood	Hazardous Materials Release	Criminal Attack
Geologic Hazards	Transportation Incident	Cyberattack
Infectious Disease and Pest Infestation		Terrorist or Nation-State Attack
Severe Summer Weather		
Severe Winter Weather		
Space Weather		
Wildfire/Urban Fire		

- **Natural hazards**: acts of nature. The natural hazards identified in this plan are Flood, Fire, Drought, Severe Winter Weather, Severe Summer Weather, Infectious Disease and Pest Infestation, Space Weather and Geologic Hazards.
- **Technological hazards**: accidents or the failures of systems and structures. Technological hazards in this plan include Dam Failure, Hazardous Material Release, and Transportation Incidents.
- **Human-caused incidents**: the intentional actions of an adversary. Human-caused incidents in this plan include Cyberattack, Criminal Attack, Civil Disturbance and Terrorist or Nation-State Attack.

Risk Assessment by Jurisdiction					
Hazard	**Burleigh County**	**Lincoln**	**Regan**	**Wilton**	**Wing**
Civil Disturbance	X	X	X	X	X
Criminal, Terrorist or Nation-State Attack	X	X	X	X	X
Cyberattack	X	X	X	X	X
Dam Failure	X	X			
Drought	X	X	X	X	X
Fire (urban and wildland)	X	X	X	X	X
Flood	X	X	X	X	X
Geologic Hazards	X				
Hazardous Materials Release	X	X	X	X	X
Infectious Disease and Pest Infestation	X	X	X	X	X
Severe Summer Weather	X	X	X	X	X
Severe Winter	X	X	X	X	X
Space Weather	X	X	X	X	X
Transportation Incident	X	X		X	X

The jurisdictions are affected by the hazards with slight variances in susceptibility. Changes in development and land use has not affected community vulnerability.

Civil Disturbance and Criminal, Terrorist, or Nation/State Attack
All jurisdictions could be impacted; however, greater vulnerability would be anticipated in the most populous city and capital of North Dakota—City of Bismarck. The greatest threat would be significant impact to critical facilities and/or infrastructure.

Dam Failure
Two, high-hazard dams present significant risks to several sections of Burleigh County. Failure of the Garrison Dam in McLean County could affect the southwest section of Burleigh County (including the Cities of Bismarck and Lincoln) as discussed in the Dam Failure section. Failure of the Heart Butte Dam in Grant County could affect portions in far southwest Burleigh County.

Drought
Rural Burleigh County (farmland acreage) would suffer significant agricultural losses, and grain elevators (Sterling, and Wilton) and agronomy centers may suffer losses due to drought and loss of crops.

Water Supplies: The South Central Regional Water District is the major supplier for Burleigh County. The City of Bismarck Public Works supplies water to the majority of the City of Lincoln (mobile home court and industrial area to the north of the mobile home court through South Central Regional Water District) and areas of Burleigh County that border the City of Bismarck. Water supply is adequate with rare requests to decrease water consumption during periods of drought/extreme heat.

In addition to South Central Regional Water:

- City of Lincoln has two, gravity-fed water towers with a 500,000-gallon capacity for each tower.
- City of Regan continues to have maintained wells and individual septic systems.
- City of Wilton has one, gravity-fed water tower with a 300,000-gallon capacity.
- City of Wing has one, gravity-fed water tower with a 50,000-gallon capacity.

Resources for potable water supplies are identified in the Burleigh County Emergency Operations Plan.

Fire
The impacts of drought and wildland fire could impact city residents in several ways; however, rural Burleigh County is more susceptible to these hazards due to open prairie and agricultural activities especially in areas around the cities (wildland urban interface). The incorporated cities are more vulnerable to urban fire with losses greater in the more populated cities.

Flood

The following figure displays that no jurisdiction is immune to flood vulnerability and has either experienced the vulnerability or has the increasing susceptibility to experience the vulnerability. Additionally, inundation maps show the vulnerability and can be found in the Attachments.

Flood Vulnerabilities by Jurisdiction						
	Burleigh County	**Bismarck**	**Lincoln**	**Regan**	**Wilton**	**Wing**
Creek/River Flooding	X	X	X			
Overland or Flash Flooding	X	X	X	X	X	X
Ice Jam Flooding	X	X	X			
Lift Stations	X	X	Gravity Flow		Gravity Flow	X
Lagoon Overruns	X	X	X			
Road Washouts	X	X	X	X	X	X

Overland or flash flooding and road washouts are common to all jurisdictions.
Regan, Wilton, Wing are not susceptible to creek/river flooding and ice jam flooding since they are not located adjacent to a creek or river. Likewise, they are also not near lagoons.

Burleigh County remains prepared through review and update of the Burleigh County Flood Annex. Inundation maps with varying scenarios and specific locations of residents and infrastructure are provided in the Burleigh County Flood Annex through the Missouri River and Apple Creek Stages and response primarily affecting southwest Burleigh County with the possibility of also reaching the City of Lincoln. As stated in the Flood Annex, the County Highway Department, Sheriff, Emergency Management, local support agencies (Bismarck Rural Fire, Sterling Rual Fire, Wilton Rural Fire, and Lincoln Police) will help to monitor rural areas and the smaller communities for localized overland or flash flooding issues, in addition to monitoring the more frequent flood risk areas along rivers and creeks. Burleigh County also maintains an interactive flood and elevation tool mapping tool which shows various effects based on forecast Missouri River and Apple Creek stages.

Geologic Hazards
No jurisdictions have significant history of this hazard.

An area of rural SW Burleigh County along the southern portion of Apple Creek has experienced some bank failures and slumping; no structures affected. University of Mary is currently undergoing a bank stabilization project uphill from Apple Creek. Areas along River Road in north Bismarck and rural Burleigh County (Western County border) also experience some sloughing from the grade of the eastern ridge with no structures affected. Both areas are monitored by the Burleigh County Highway Department via drone photography.

The Double Ditch Indian Village State Historical Site (SW Burleigh County) suffered severe erosion caused by the 2011 Missouri River flood and has undergone bank stabilization. The site is monitored by the ND Historical Society on a biannual basis to include drone aerial inspections.

Hazardous Materials Release and Transportation Incident
Varied levels of susceptibility are apparent for all jurisdictions. Highway 83 runs through the western side of Burleigh County (including the Cities of Bismarck and Wilton). Additionally, Interstate 94 transects the middle of Burleigh County through the City of Bismarck and near the City of Lincoln. Railroad tracks run through Burleigh County, Bismarck, and Wilton. The City of Regan is located approximately ½ mile north of Highway 36, which is not a major transportation route. Throughout the year, farmers transport anhydrous ammonia in pup tanks.

The City of Bismarck is far more susceptible to the hazards due to being an urban center with the highest population density in Burleigh County. Other factors increasing susceptibility include:

- State Capitol
- Government Buildings (local, state, and federal)
- Higher Education Facilities
- Numerous Medical Facilities
- Tourism Destination
- Commercial and Agricultural Industries
- Increased Number of Impervious Surfaces
- Increased Transportation Flow

Hazardous Materials Release and Transportation Incident						
	Burleigh County	**Bismarck**	**Lincoln**	**Regan**	**Wilton**	**Wing**
Anhydrous Ammonia	**X**	**X**	**X**	**X**	**X**	**X**
Bulk Fuel	**X**	**X**	**X**		**X**	**X**
Bulk Fertilizer	**X**	**X**				
Farm Chemicals	**X**	**X**	**X**	**X**	**X**	**X**
Propane	**X**	**X**	**X**		**X**	**X**
Fuel and Gas	**X**	**X**	**X**	**X**	**X**	**X**
Natural Gas	**X**	**X**	**X**		**X**	
Major Transportation Route	**X**	**X**	**X**		**X**	
Railroad	**X**	**X**	**X**		**X**	

Infectious Diseases and Pest Infestations
Each jurisdiction is susceptible to infectious diseases and pest infestations; however, the more rural communities of Regan, Wilton, and Wing and unincorporated Burleigh County are particularly susceptible to diseases that impact plants and animals. The cities are more susceptible to communicable disease due to population density.

Severe Summer Weather
All jurisdictions are impacted be severe summer weather and its subtypes with frequency during the core summer months of June, July and August, but can start as early as March or April, usually by mid-May, and persist past mid-September, even into early November (tornadoes occurred in Bismarck on November 1, 2000). Severe summer weather incidents may cause major economic losses based on the level of impact. Windstorms may result in downed power lines coupled with damage from flying debris and damage to facilities. Mobile home dwellings are encouraged to have tie-downs. Bismarck, Lincoln, Wilton, and Wing maintain and test outdoor warning sirens. Wilton also utilizes their sirens to alert fire or ambulance crews.

Severe Winter Weather
All jurisdictions are impacted by severe winter weather and its subtypes with frequency generally during the period from mid-November through early April. Severe winter weather often results in blocked roads and can affect each jurisdiction and may lead to economic loss dependent upon severity and length of time. Rural Burleigh County residents have backup power sources (generators and/or coal or wood-burning stoves) and extra fuel sources (gas and propane). Windstorms may result in downed power lines coupled with damage from flying debris and damage to facilities.

Space Weather
No jurisdictions have any significant history of this hazard. Disruption of critical facilities and infrastructure would have a significant effect on each jurisdiction to include medical, law, fire, and facilities dependents on satellite data. Emergency services will continue to operate in a diminished capacity if there is a disruption to communications technology.

Bismarck/Burleigh: Critical facilities with backup power include both hospitals, the City/County Building, Provident Building (County Building), Central Dakota Communications Center (911), Emergency Operations Center, Bismarck Police Department, Burleigh County Sheriff's Office, Bismarck/Burleigh Public Health.

Lincoln: Critical facilities without backup power include Lincoln City Hall/Lincoln Police Department, Lincoln Public Works Facility, two Pump Stations, and Lift Station (listed as mitigation projects in Attachments)

Wilton: The Wilton Ambulance and Wilton Senior Center (utilized as a shelter) have a backup generator; however, the following critical facilities do not have backup power: Wilton City Hall/Fire Department, and Wilton Water Tower.

Wing: Critical facilities without backup power include the City of Wing Fire Department/City Hall, water tower, two wells (new water treatment building), and two lift stations (listed as mitigation projects in Attachments).

Critical Facilities

Critical facilities and infrastructure are assets essential to public safety and continuity of government operations. Damaged or destroyed facilities or infrastructure could have debilitating effects on safety, security, public health, or the economy in Burleigh County, including Lincoln, Regan, Wilton, and Wing.

The hazards most likely to impact critical facilities are cyberattack, flood, hazardous materials release, severe summer weather, severe winter weather, and space weather.

- Cyberattack: Critical facilities utilize computerized system(s) as a main function of providing services.

- Flood: Flooding of the Missouri River and Apple Creek cause damage to homes in the western part Burleigh County and the City of Bismarck as well as farmland and rural homes along the creek areas. During flooding events, roads may become inundated with water and cut off accessibility to critical facilities.

- Hazardous Materials Release: Hazardous materials are transported via three modes into and within Burleigh County: Highways, Railroad, and Air. Dependent upon location of release, critical facilities could be affected with damage or complete loss.

- Space Weather: Solar flares would impact communications, solar radiation storms will impact satellites, and geomagnetic storms will cause the greatest damage—disrupting navigation systems such as the Global Navigation Satellite System (GNSS) and creating harmful geomagnetic-induced currents (GICs) in the power grid and pipelines. It's possible for these storms to cause power grid energy spikes, which could trigger fires, power blackouts and physically harm individuals coming into contact with storm-spiked wires or pipelines.

- Summer Weather: Extreme heat, hail, lightning, high winds, and tornadoes may cause damage or complete loss to some critical facilities in Burleigh County.

- Winter Weather: Major arterials are vulnerable to becoming blocked with snow making them impassible. Many county and township roads become blocked during winter storms and cities are largely affected by winter storms.

Major facilities and infrastructure:

Category	Type
Communications	Cell Towers Communication Towers Information/Data/Record Centers Media
Emergency Services	Law Fire Emergency Medical Services (EMS) ND National Guard Public Safety Answering Points (PSAPs)/911 Centers Public Works
Energy/Utility	Electric Power Generation and Substations Pipelines Transmission Lines Utility Companies Water Distribution Systems Water Towers Water Treatment Plants
Financial Institutions	Banks Credit Unions
Government	Courthouses Jails Schools
Industrial and Storage	Food Processing and/or Storage Fuel Health and Medical Supplies Major Industries
Medical	Clinics Hospitals Long-Term Care Facilities Pharmacies
Transportation	Airports Highways/Bridges Railroads

Hazards Excluded or Minimally Addressed in this Plan

Hazard	Notes
Avalanche	Avalanches require slopes that generally do not exist in Burleigh County. Burleigh County is not covered by the National Avalanche Center and has no history of declared avalanche disasters.
Climate Change	Climate change is addressed as a condition that impacts most hazards and not as a separate hazard.
Coastal Erosion	Burleigh County does not have an ocean coastline.
Coastal Storm	Burleigh County does not have an ocean coastline.
Hurricane	Burleigh County does not have an ocean coastline.
Public Utility Failure	Utility failure is viewed as a consequence of other hazards and not as a separate hazard.
Shortage/Outage of Critical Materials	Lack of critical materials is viewed as a consequence of other hazards and not as a separate hazard.
Tsunami	Burleigh County does not have an ocean coastline.
Volcano	Burleigh County has no identified volcanoes; however, volcanic ashfall can occur over Burleigh County, but the frequency is rare, and the potential impacts are not expected to exceed local capabilities. The impact of an external volcano is discussed in geologic hazards.
Windstorm	Windstorms are identified in severe summer and severe winter weather hazards.

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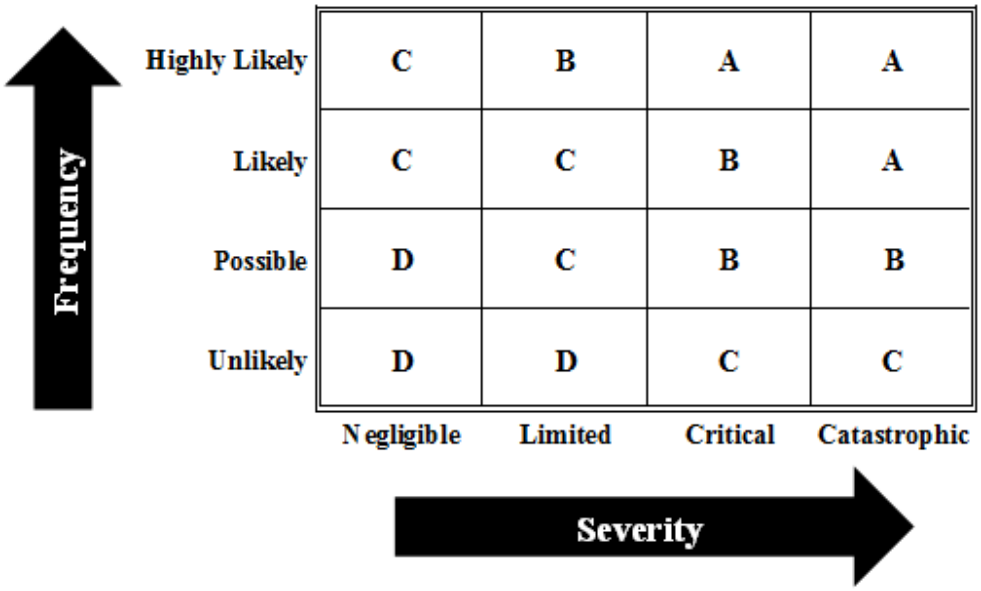
Risk Analysis Worksheet

Frequency: How often is this hazard likely to develop in this area?

Highly Likely	Nearly 100% probability in the next year
Likely	10–100% probability in the next year, or at least 1 chance in next 10 years
Possible	1–10% probability in the next year, or at least 1 chance in next 100 years
Unlikely	Less than 1% probability in next 100 years

Severity: What is the expected extent of damage caused by this type of hazard?

Catastrophic	More than 50% of jurisdiction affected
Critical	25–50% of jurisdiction affected
Limited	10–25% of jurisdiction affected
Negligible	Less than 10% of jurisdiction affected



(Source: Risk Assessment Matrix and FEMA Multi-Hazard Identification and Risk Assessment, January 1, 1997, Risk Assessment Approaches – Chapter/Section Number: Part 3)

Risk Class: Classification of the overall risk posed to the jurisdiction and immediacy of necessary action:

Seasonal Pattern: When is the type of hazard most likely to occur?

Probable Duration: How long will this event typically have an impact on the community?

Speed of Onset: How much advance warning does the community have for this type of event?

Location/Jurisdiction: Which areas are affected?

Risks: Types of situations that might result from the hazard.

Hazard
Frequency: _____ **Severity:** _____ **Risk Class:** _____ **Seasonal Pattern:** _____ **Duration:** _____ **Speed of Onset:** _____

DESCRIPTION:

_____

_____

_____

_____

_____

_____

IDENTIFIED IMPACTS:

_____

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HISTORY:

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Hazard Risk Analysis Chart with Vulnerabilities for each Hazard

Risk Class:	C	C	A	B	C	C	C	C	B	B	B	A	B	C
HAZARD:	Civil Disturbance	Criminal, terrorist, or Nation-State Attack	Cyberattack	Dam Failure	Drought	Fire	Flood	Geologic Hazards	Hazardous Materials Release	Infections Disease and Pest Infestation	Severe Summer Weather	Severe Winter Weather	Space Weather	Transportation Accident
Blocked Roads	X	X	X	X		X	X	X	X		X	X	X	X
Building Collapse		X		X		X	X	X	X		X	X		
Business Interruptions	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Delayed Emergency Response	X	X	X	X		X	X	X	X	X	X	X	X	X
Downed Power Lines		X		X		X	X	X	X		X	X		
Downed Trees				X		X	X	X	X		X	X		
Evacuation (Full)				X					X					
Evacuation (Localized)	X	X		X		X	X	X	X		X	X		X
Explosion		X				X			X		X			X
Flooding (Street)				X			X				X			
Flooding (Structure)				X			X				X			
HAZMAT Release		X		X		X	X		X		X	X		X
Increased Fire Potential					X	X			X		X	X	X	
Increased Public Safety Runs	X	X		X		X	X		X	X	X	X	X	X
Livestock Injury/Death		X		X	X	X	X		X	X	X	X		
Loss of Economy		X	X	X	X	X	X		X	X	X	X	X	X
Loss/Overcrowded Medical Facilities		X		X		X	X		X	X	X	X	X	X
Loss of Potable Water		X		X	X		X	X	X	X	X	X		
Loss of Power		X	X	X		X	X	X	X		X	X	X	
Mass Casualties		X		X		X	X		X	X	X		X	X
Property Damage	X	X		X	X	X	X	X	X		X	X	X	X
School Closure		X		X		X	X		X	X	X	X	X	
Sewer Backup				X			X				X			
Wind Chill												X		

Overall Vulnerability Summary

HAZARD	Description
Civil Disturbance	No change.
Criminal, Terrorist or Nation-State Attack	No change.
Cyberattack	Changed from Possible to Highly Likely due to history and trends
Dam Failure	No change.
Drought	No change.
Fire	No change.
Flood	No change.
Geologic Hazards	Changed from Likely to Highly Likely due to radon inclusion
Hazardous Materials Release	No change.
Infectious Diseases and Pest Infestations	No change.
Severe Summer Weather	No change.
Severe Winter Weather	No change.
Space Weather	Change from Possible to Likely due to history
Transportation Accident	No change.

THIRA Survey

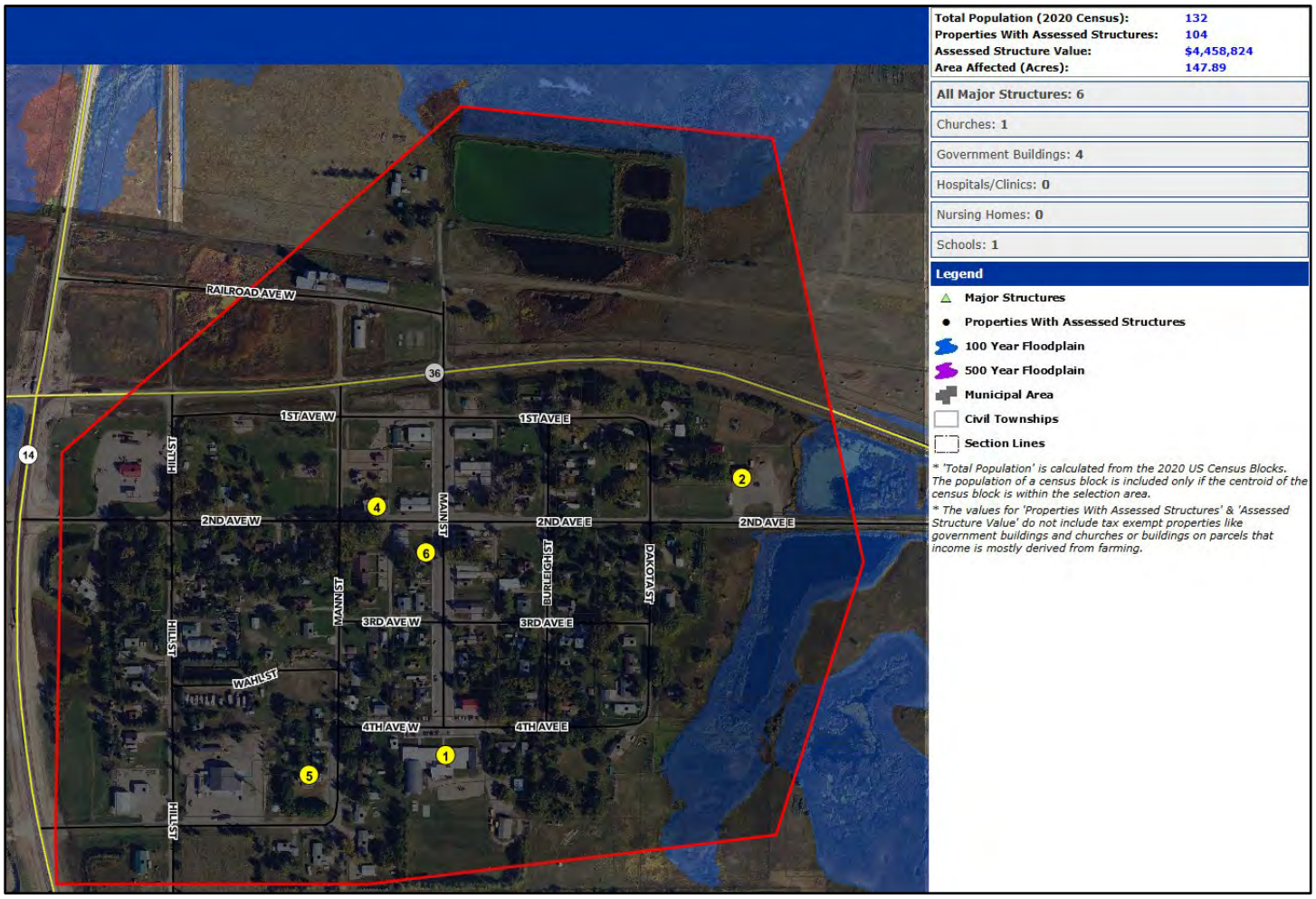
		Very Likely	Likely	Possible	Unlikely	Improbable
	Score	5	4	3	2	1
Catastrophic	5			• Dam Failure	• Nuclear Terrorism Attack	
Significant	4				• Biological Terrorism Attack • Chemical Terrorism Attack • RDD Terrorism Attack	
Moderate	3	• Summer Storms • Winter Storms		• Aircraft as a Weapon • Chemical Substance Spill/Release • Explosives Terrorism Attack	• Radiological Substance Release	
Minor	2			• Armed Assault • Biological Food Contamination • Chemical/Biological Food Production Attack • Human Pandemic Outbreak • Supply Chain Disruption • Transportation Incident		
None/ Negligible	1		• Cyber Attack	• Animal Disease Outbreak • Civil Disorder • Flood • Wildfire		

*Based on 29 responses

THIRA Step 2 complete. THIRA Steps 3-4 completed in 2020 and reviewed in 2024.

Damage Assessment

An in-house GIS mapping application was created to assess damages from nearly any hazard.



Source: Burleigh County GIS

The assessment includes:

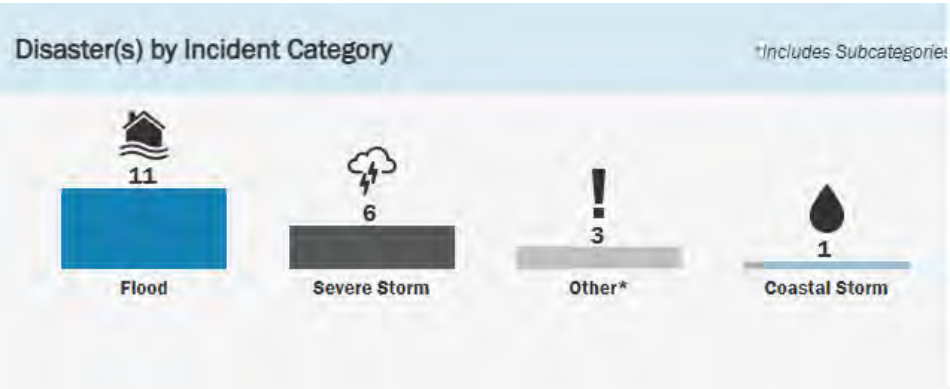
- Any geometric shape
- Population within the shape
- Critical infrastructure
- Properties with assessed structures
- Assessed structure values
- Breakdown of the major structure types

Burleigh County Disaster Declarations

Number	Declared	Description
4888	06/20/2025	Severe Storm, Tornadoes, and Straight-line Winds
4509	04/01/2020	COVID-10 Pandemic
1981	5/10/2011	Flooding
1901	4/21/2010	Severe Winter Storm
1829	3/24/2009	Severe Storms and Flooding
1376	5/28/2001	Floods
1334	6/27/2000	Severe Storms and Flooding
1279	6/8/1999	Severe Storms, Tornadoes, Snow and Ice, Flooding, Ground Saturation, Landslides and Mudslides
1174	4/7/1997	Severe Storms/Flooding
1157	1/12/1997	Severe Winter Storms/Blizzards
1118	6/5/1996	Flooding
1050	5/16/1995	Severe Storms, Flooding, Ground Saturation
1001	7/26/1993	Flooding, Severe Storms
581	4/26/1979	Storms, Snowmelt, Flooding
554	4/17/1978	Storms, Ice Jams, Snowmelt, Flooding
287	6/5/1970	Severe Storms, Flooding
256	4/18/1969	Flooding

Burleigh County Emergency Declarations

Number	Declared	Description
3477	3/13/2020	COVID-19
3318	4/7/2011	Flooding
3309	3/14/2010	Flooding
3247	9/13/2005	Hurricane Katrina Evacuation
3016	7/21/1976	Drought
3012	4/13/1976	Severe Flooding



Source: Source: http://www.fema.gov/disasters

US Department of Agriculture Secretarial Disaster Declarations

USDA Secretarial Disaster Declarations – Burleigh County Crop Disaster Losses by Crop Year														
Crop Year	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Primary		X	-	X		X	-	X	X	X	X	-		
Contiguous	X		-		X		-					-	X	X

Source: USDA/FSA, 2025. (https://www.fsa.usda.gov/resources/disaster-assistance-program/disaster-designation-information)

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Hazards

Civil Disturbance

Frequency	Likely (10-100% probability in the next year, or at least 1 chance in next 10 years)
Severity	Limited (10-25% of jurisdiction affected)
Risk Class	C
Seasonal Pattern	None
Duration	Hours/Days
Speed of Onset	No warning
Location	Countywide
Impacts	Blocked Roads, Business Interruptions, Delayed Emergency Response, Increased Public Safety Runs, Property Damage

Description

Civil disturbances are defined as group acts of violence and disorders prejudicial to public law and order; terrorist incidents, a form of civil disturbance, are defined as distinct criminal acts committed or threatened to be committed by a group or individual to advance a political objective. (Source: U.S. Department of Justice Office of Justice Programs)

Civil disturbances can occur anywhere in Burleigh County. Most civil disturbances are local in scale and within the capability and responsibility of local law enforcement. It is not possible to predict the location of a civil disturbance; however, large venue locations such as stadiums, government facilities, industrial facilities, and locations with correctional facilities may be more susceptible to such incidents.

History

Smaller-scale riots and assaults can and have occurred in correctional facilities located within Burleigh County:

- Bismarck Transition Center
- Burleigh/Morton Detention Center
- ND Missouri River Correctional Center
- ND State Penitentiary

2016: The Dakota Access Pipeline (DAPL) project resulted in multiple criminal activities including acts of vandalism, trespassing, riots, vehicles, hay bales and tires set on fire, and the arrest of 709 protesters. The protestors gathered to express concern about the installation of an 1134-mile-long crude oil pipeline across North Dakota and other states. The protest transitioned into an unlawful assembly and civil disorder on August 10, 2016, when individuals attempted to block access to construction activities associated with the pipeline. Originally an environmental-focused event, it quickly grew from a few hundred participants to numbers estimated near 10,000. It also expanded its scope to include real or perceived concerns surrounding Native American rights, as well as a myriad of other environmental concerns not necessarily associated with construction of the DAPL. Widespread criminal activity spawned from the protest, to include vandalism, terroristic threats, and intimidation tactics directed at local landowners as well as law enforcement and their families, doxing of law enforcement and other officials (doxing is the Internet-based practice of researching and broadcasting private or identifiable information), arson, poaching, and the theft and killing of livestock in the area. The majority of activities occurred in Morton and Sioux Counties; however, Burleigh and Emmons Counties also experienced activity on a smaller scale. (Source: ND State Emergency Operations Plan, December 2018)

Criminal, Terrorist, or Nation-State Attack

Frequency	Possible (1-10% probability in next year, or at least 1 chance in next 100 years)
Severity	Limited (10-25% of jurisdiction affected)
Risk Class	C
Seasonal Pattern	None
Duration	Hours/Days
Speed of Onset	No warning
Location	Countywide
Impacts	Blocked Roads, Building Collapse, Business Interruptions, Delayed Emergency Response, Downed Power Lines, Evacuation (Localized), Explosion, HAZMAT Release, Increased Public Safety Runs, Livestock Injury/Death, Loss of Economy, Loss/Overcrowded Medical Facilities, Loss of Potable Water, Loss of Power, Mass Casualties, Property Damage, School Closure

Description

International Humanitarian Law defines attacks as acts of violence against the adversary, whether in offense or defense in whatever territory conducted Criminal attack can occur anywhere, including a residence. Mass attacks, such as shooting, are more likely to occur where there is a gathering of people with the potential to be victims.

The Federal Bureau of Investigation (FBI) identifies two categories:

> **International terrorism**: Violent, criminal acts committed by individuals and/or groups who are inspired by, or associated with, designated foreign terrorist organizations or nations (state-sponsored)
>
> **Domestic terrorism**: Violent, criminal acts committed by individuals and/or groups to further ideological goals stemming from domestic influences, such as those of a political, religious, social, racial, or environmental nature

As one of the largest urban centers and the State Capital, Bismarck is far more susceptible to this risk than other jurisdictions within the County.

History
Although there have been no National Security Emergencies specific to Burleigh County, any suspicious activity is reported to the ND State and Local Intelligence Center.

Jurisdiction	Number of Crimes		
	2023	2022	2021
Bismarck Police Department	6,515	6,793	7,731
Bismarck State College	25	18	
Burleigh County Sheriff's Office	991	865	1,036
Lincoln Police Department	196	255	211

Source: ND Bureau of Criminal Investigation

Cyberattack

Frequency	Highly Likely (Nearly 100% probability in the next year)
Severity	Critical (25-50% of jurisdiction affected)
Risk Class	A
Seasonal Pattern	None
Duration	Days/Weeks
Speed of Onset	None
Location	Countywide

Description
Hacker, attacker, or intruder — These terms are applied to the people who seek to exploit weaknesses in software and computer systems for their own gain. Although their intentions are sometimes benign and motivated by curiosity, their actions are typically in violation of the intended use of the systems they are exploiting. The results can range from mere mischief (creating a virus with no intentionally negative impact) to malicious activity (stealing or altering information). Source: Cybersecurity and Infrastructure Security Agency

Unified Cybersecurity Approach
April 11, 2019: Senate Bill 2110 was signed by the Governor to make ND the first state to authorize a central, shared service approach to cybersecurity strategy across all aspects of state government including state, local, legislative, judicial, K-12 education and higher education. The state network has 252,000 daily users and more than 400 entities.

Identified Impacts
- Blocked Roads
- Business Interruptions
- Delayed Emergency Response
- Loss of Economy
- Loss of Power

History
Cyberattacks occur daily and are mitigated through protected networks and servers through the ND Department of Information Technology (NDITD) and the City of Bismarck Information Technology Department. NDITD has a robust service for cyber security, governance, and risk and compliance services for political subdivisions (including Burleigh County). Source: NDITD Website

Publicly Known Attacks
2025, February: Cyberattack shut down most systems at Lee Enterprises, the parent company of The Bismarck Tribune. The Bismarck Tribune returned to normal operations by the end of March, 2025. (Source: The Bismarck Tribune, 2025)

2025, January: Bismarck along with other North Dakota school districts, was impacted by a nationwide data breach involving PowerSchool, a software company that manages sensitive student and staff data for many school systems. The breach involved PowerSchool's customer support portal, PowerSource, where an unknown entity gained unauthorized access and downloaded an undisclosed number of records. An investigation by cybersecurity company CrowdStrike found that a prior hack occurred between August and September of 2024. PowerSchool reached a financial agreement with the hackers to have the sensitive information destroyed. (Source: KFYR TV, 2025)

2022, October: CommonSpirit Health, the fourth-largest health system in the nation, had to reschedule surgeries and appointments due to a ransomware attack. St. Alexius Health was among the CommonSpirit hospitals hit in the attack. It took five days to restore regular business. Ambulances and life-sustaining surgeries were not impacted in Bismarck. (Source: The Bismarck Tribune, 2022).

2022, June: ND Workforce Safety and Insurance was a victim of a cybersecurity attack involving personal data via an email attachment. (Source: ND Workforce Safety and Insurance website)

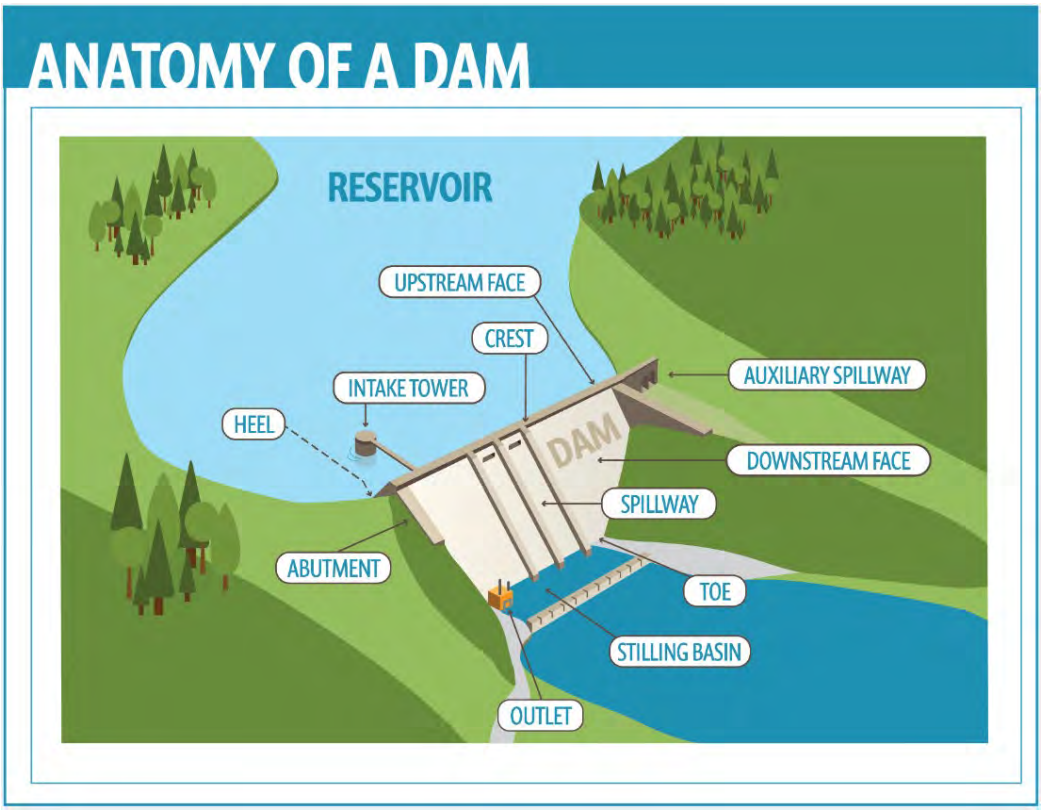
2019, February: Bismarck Public Schools suffered a vicious malware attack resulting in a severe data breach (names, addresses, emails, and phone numbers of individuals had been accessed). It should be noted that this was a nationwide breach through a software and other schools throughout the State of North Dakota were also affected.

2016: During the Dakota Access Pipeline (DAPL) criminal protests, unknown individual(s) released personally identifying information of local officials and law enforcement officers who assisted in the protest response with the intent to have others harass and/or intimidate them or their families. This attack was accomplished through Doxing emails and social media posts, which publicly identifies or publishes private information about someone, especially as a form of punishment or revenge.

Dam Failure

Frequency	Possible (1-10% probability in next year, or at least 1 chance in next 100 years)
Severity	Critical (25-50% of jurisdiction affected)
Risk Class	B
Seasonal Pattern	Spring/Summer
Duration	Days/Weeks
Speed of Onset	Little warning
Location	Burleigh County, Lincoln

Description
A dam is a structure that is built across a river or body of water to hold, divert, or regulate water. Often the body of water stored behind a dam is referred to as the reservoir or lake.



Source: United States Army Corps of Engineers National Inventory of Dams

Several low-head dams are located in Burleigh County (all within five miles from the City of Bismarck). The ND Department of Water Resources definition: "Low head dams are usually simple concrete or rock masonry structures that span the width of the river or stream, raising the water level behind them until it reaches a height sufficient to flow over the dam. These low head dams can create dangerous conditions that the public may not be aware of or may underestimate. Under the right conditions, water flowing over the dam can cause a "roller effect" on the downstream side of the dam. Strong recirculating currents can trap and drown boaters, swimmers, or other members of the public."

Because low head dams are known to be dangerous, the ND Department of Water Resources provides free cautionary safety signs to the owners of these dams. Multiple signs per dam will be provided; however, installation is a local responsibility.

Identified Impacts

- Blocked Roads
- Building Collapse
- Business Interruptions
- Delayed Emergency Response
- Downed Power Lines
- Downed Trees
- Evacuation (Full)
- Evacuation (Localized)
- Flooding (Street)
- Flooding (Structure)
- HAZMAT Release
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Potable Water
- Loss of Power
- Mass Casualties
- Property Damage
- School Closure
- Sewer Backup

History – There is no history of a dam failure within the County.

The ND Department of Water Resources identifies 257 dams (structure type) in Burleigh County. All dams have an element of hazard to cause loss of life and property damage should the dam fail. One dam is classified as "Significant", and one dam is classified as "High"; both have Emergency Action Plans. Rural Burleigh County, Bismarck, and Lincoln are at risk for dam failure while dams do not pose a threat to the cities of Regan, Wilton, and Wing. No other dam failures in the jurisdiction affect critical infrastructure but may cause agricultural or environmental damage.

Dam failure hazard classifications (High, Significant, Low) assess the potential consequences of a dam failure, specifically risks to human life and economic/environmental damage downstream, rather than the dam's physical condition or structural integrity. These classifications determine maintenance standards, emergency action planning, and regulatory oversight.

Hazard Classifications (FEMA Federal Guidelines for Dam Safety**)**

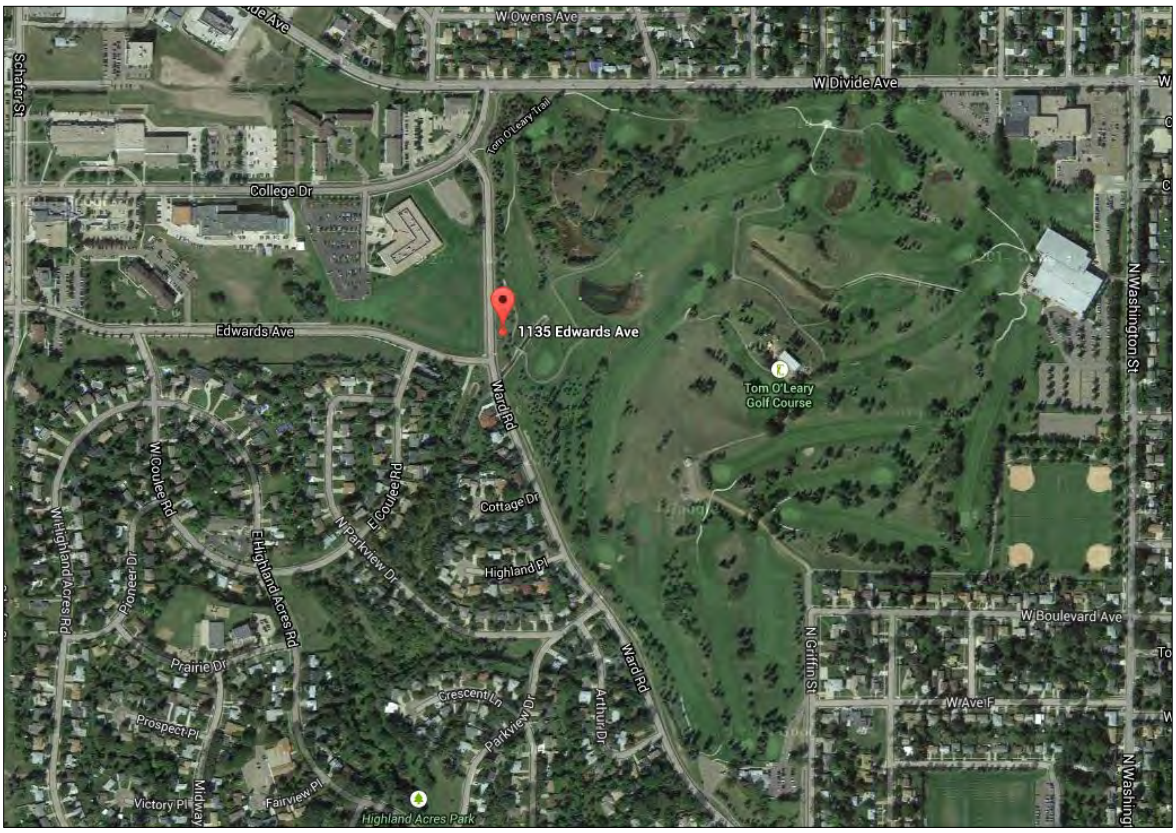
- LOW HAZARD POTENTIAL Dams assigned the low hazard potential classification are those where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.
- SIGNIFICANT HAZARD POTENTIAL Dams assigned the significant hazard potential classification are those dams where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.
- HIGH HAZARD POTENTIAL Dams assigned the high hazard potential classification are those where failure or mis-operation will probably cause loss of human life.

Location	Type	Status	Structure Name	Purpose	Hazard Class
14107604CA	Dam	Intact	Neideffer Flood Control Dam	Flood Control	Low
13908032ABB	Dam	Intact	Jackman Coulee Dam 1	Flood Control	Low
13908032ABC	Dam	Intact	Jackman Coulee Dam 2	Flood Control	High
14307906CB	Dam	Intact	Aune Dam; Earl	Flood Control	Undetermined
13908027ADA	Dam	Removed	Hay Creek Overflow Dam	Flood Control	Low
13907927DC	Dam	Intact	McDowell Dam	Recreation	Significant
14007605BC	Dam	Intact	Rice Lake Dam	Recreation	Low
14207611AB	Dam	Intact	ND No Name Dam 122	Recreation	Low
14108006CB	Dam	Intact	Lange Dam; Donald	Recreation	Undetermined
14307934D	Dam	Breached	Quain Dam	Recreation	Undetermined

Source: ND Department of Water Resources

The “Jackman Coulee Dam 2” is flood control structure located within the City of Bismarck (1135 Edwards Avenue). The structure is on the western edge of the “Tom O’Leary Golf Course”. Failure of the urban dam classified as “high” would most likely result in environmental and home damages (200+) and/or loss due to location.

Source: ND Department of Water Resources



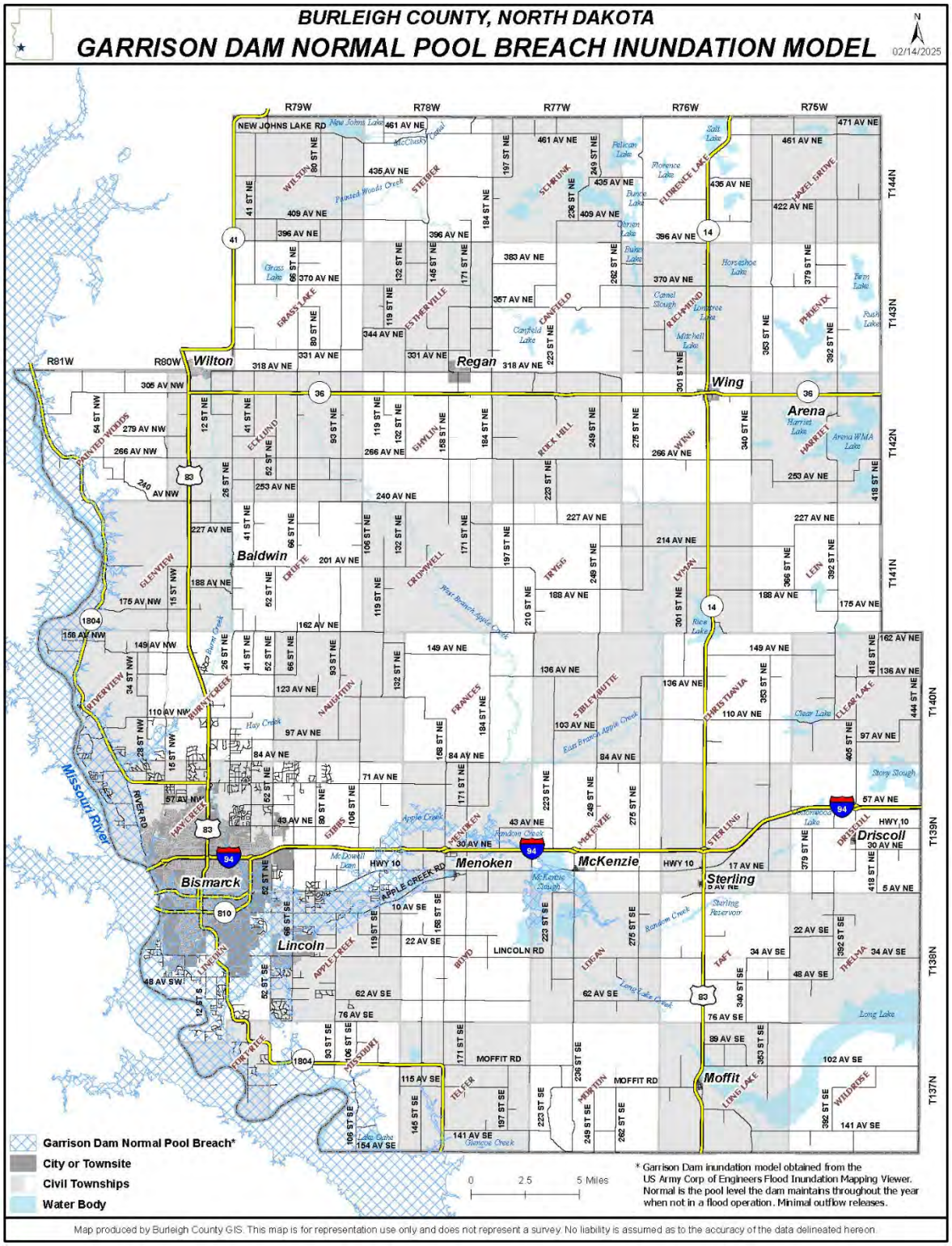
Source: Google Maps Website

McDowell Dam is a recreation area located five miles east of Bismarck (1951 93rd Street NE). Available activities include swimming, boating, fishing, and paddle boating. Failure of the rural dam classified as "significant" would most likely result in environmental and home loss (approximately 100) due to location. Inundation maps with varying scenarios and specific locations of residents and infrastructure are listed in the Emergency Action Plan.

Source: ND Department of Water Resources

Source: ND Game and Fish

Lake Sakakawea was formed by construction of the Garrison Dam in 1953, covering 368,000 surface acres with maximum storage of 24.5 million acre-feet, and 1,600 miles of shoreline in six counties. Total failure of the dam could affect approximately 21,568 people and 6,465 properties with an assessed value of $1,845,005,873 utilizing the Burleigh County Damage Estimator.



Source: Burleigh County GIS

The U.S. Army Corps of Engineers, Omaha District, completed a Dam Safety Modification Study in June 2023 at Garrison Dam, near Riverdale, North Dakota. The study evaluated what repairs or improvements are needed to address structural concerns at certain places at the project, primarily within the spillway. These concerns pose risks to USACE's ability to operate the dam during extreme flood events. The Dam Safety Modification Study also recommended a risk management plan to support the expeditious and cost-effective reduction of the risk posed by these concerns. Recommendations include modifications to the spillway that collectively address dam safety concerns with modernized designs. Key elements of these recommendations include:

- the full replacement of the spillway's drainage system to remove manhole covers from inside the spillway to prevent the covers from dislodging during future spillway operations.
- placement of a reinforced concrete overlay in the spillway chute and stilling basin to ensure the spillway can safely pass extreme flows
- armoring the area behind the spillway chute walls to reduce potential for erosion during extreme flows
- raising the spillway abutment monoliths to prevent overtopping which can lead to erosion and failure of the structure
- constructing a deflector beam to deflect the overflow from spillway gates
- modifying the gates' trunnion hubs to ensure they are structurally sound, and
- improving the system that deices the gates so they remain operational during winter conditions.
-

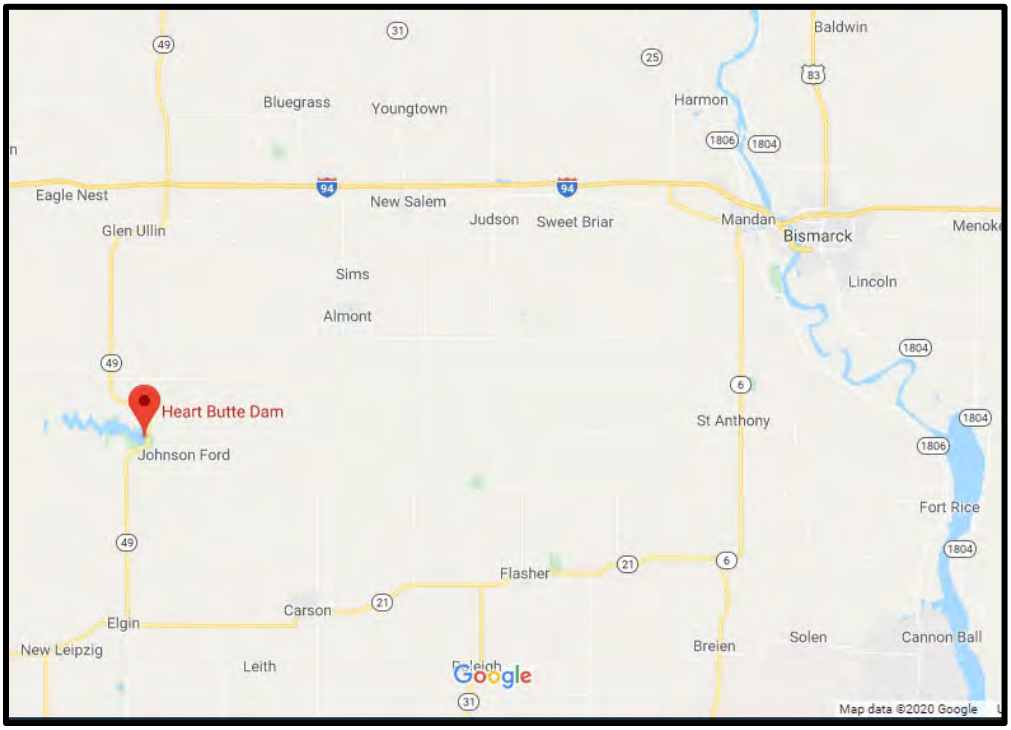
Over approximately the next six years, USACE will conduct field investigations to collect data to inform the detailed design and develop plans and specifications that are necessary to award a contract to complete these recommendations. As of 2023, construction is anticipated to begin in 2029 and take several years to complete. (Source: US Army Corps of Engineers Omaha District Website)

Any construction brings potential vulnerabilities. Burleigh County reviews project status updates and remains prepared through review and update of the Burleigh County Flood Annex. Inundation maps with varying scenarios and specific locations of residents and infrastructure are provided in the Burleigh County Flood Annex through the Missouri River Stages and Response primarily affecting the west (border) and southwest Burleigh County. A full breach has the potential to affect the City of Lincoln. Burleigh County also maintains an interactive flood and elevation tool mapping tool which shows various effects based on forecast Missouri River stages.

Heart Butte Dam and Reservoir, or Lake Tschida (renamed in 1958), is in Grant County in the southwestern part of North Dakota and approximately 70 miles southwest of Bismarck (Burleigh County). Heart Butte Reservoir has a total capacity of 214,169 acre-feet at the top of the exclusive flood control, of which 147,027 acre-feet are for flood control storage, 67,142 acre-feet for active conservation, and 5,227 acre-feet for dead storage. The lake covers an area of 6,738 acres at the top of flood control. (Source: Heart Butte Reservoir Resource Management Plan, December 2006) A Heart Butte Dam hydrologically induced static failure scenario could affect approximately 23,517 people and 7,375 properties with assessed value of $2,279,321,037 utilizing the Burleigh County Damage Estimator.

Heart Butte Dam will be modified to correct seepage issues with reservoir drawdown during construction. Construction is anticipated for spring of 2027.
Source: Bureau of Reclamation Environmental Assessment for the Heart Butte Safety of Dams Modification Project

Any construction brings potential vulnerabilities. Burleigh County reviews project status updates and remains prepared through review and update of the Burleigh County Flood Annex. Inundation maps with varying scenarios and specific locations of residents and infrastructure are provided in the Burleigh County Flood Annex through the Missouri River Stages and Response primarily affecting southwest Burleigh County. Burleigh County also maintains an interactive flood and elevation tool mapping tool which shows various effects based on forecast Missouri River stages.



Source: Google Map Data

Sweetbriar Creek Dam is located in Morton County approximately 20 miles west of Bismarck. The dam is on Sweetbriar Creek, a tributary of the Heart River. and rated as a significant hazard potential dam. A breach would be absorbed by the Heart River which flows into the Missouri River near Fox Island with no significant affect to Burleigh County. (Sweetbriar Creek Dam Updated Hydrology, Dam Break Analysis, and Hazard Classification)

Drought

Frequency	Likely (10-100% probability in the next year, or at least 1 chance in next 10 years)
Severity	Limited (10-25% of jurisdiction affected)
Risk Class	C
Seasonal Pattern	Summer
Duration	Weeks/Months
Speed of Onset	Slow onset
Location	Countywide

Description

In the most general sense, drought is defined as a deficiency of precipitation over an extended period of time(usually a season or more), resulting in a water shortage. (Source: National Drought Mitigation Center)

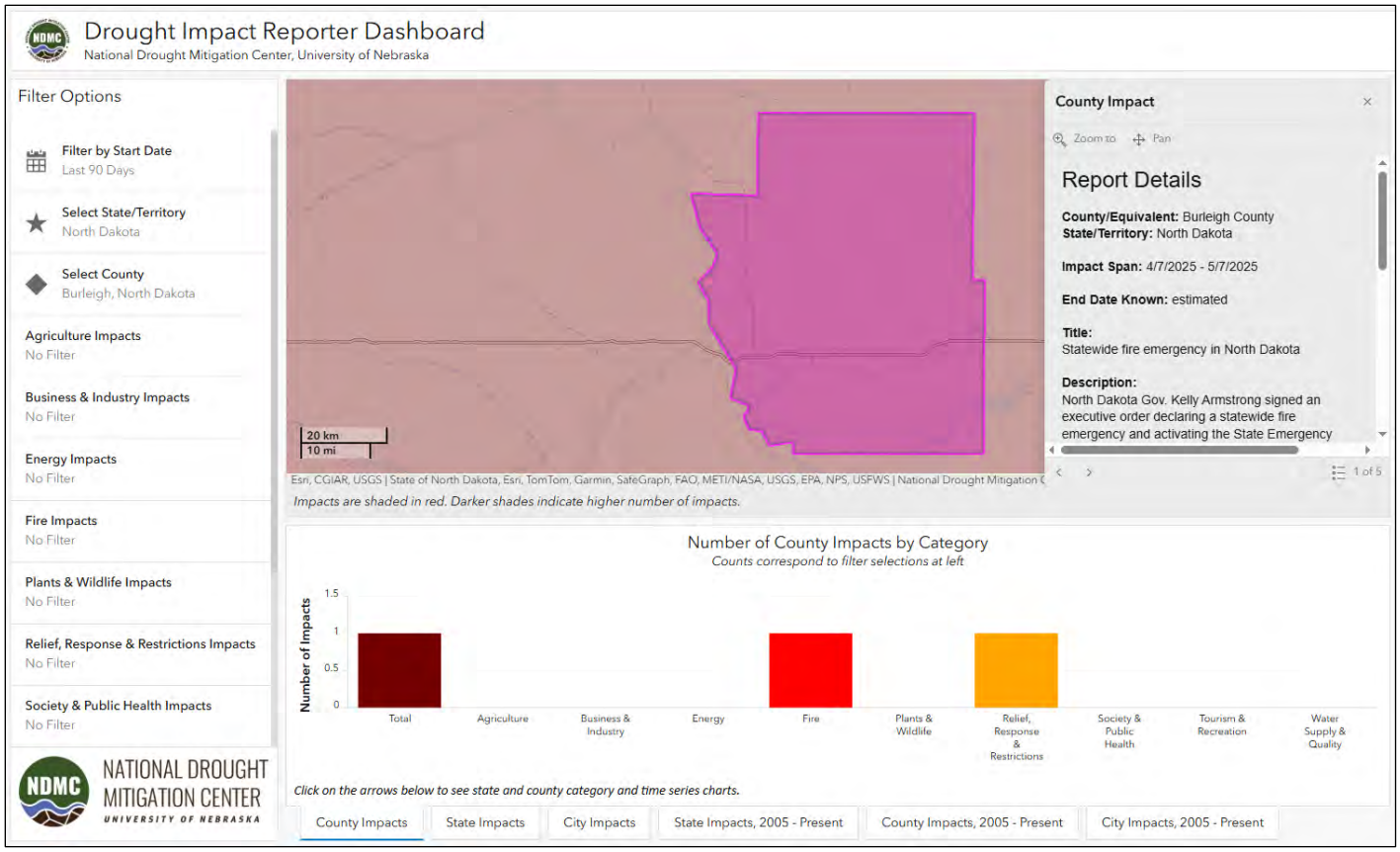
The National Integrated Drought Information System identifies types of drought:

- **Meteorological Drought** is based on the degree of dryness or rainfall deficit and the length of the dry period.
- **Hydrological Drought** is based on the impact of rainfall deficits on the water supply such as stream flow, reservoir and lake levels, and ground water table decline.
- **Agricultural Drought** refers to the impacts on agriculture by factors such as rainfall deficits, soil water deficits, reduced ground water, or reservoir levels needed for irrigation.
- **Socioeconomic Drought** considers the impact of drought conditions (meteorological, agricultural, or hydrological drought) on supply and demand of some economic goods such as fruits, vegetables, grains and meat. Socioeconomic drought occurs when the demand for an economic good exceeds supply as a result of a weather-related deficit in water supply.

Identified Impacts

- Business Interruptions
- Increased Fire Potential
- Livestock Injury/Death
- Loss of Economy
- Loss of Potable Water
- Property Damage

The [Drought Impact Reporter] presents drought impacts recorded for states, counties, and cities with earliest impacts dated 1850.



History

May, 2017 – Voluntary water restrictions requested in City of Bismarck and City of Lincoln due to low water reservoirs as a result of a period of increased temperatures.

March-July, 2017 – A least 268 rural wildfires reported to the ND Department of Emergency Services, with more than 55% reported in July. (Source: The Bismarck Tribune, July 21, 2017)

June 1, 1988 – Excessive heat reported in Burleigh County with crop damages estimated over $20 million.

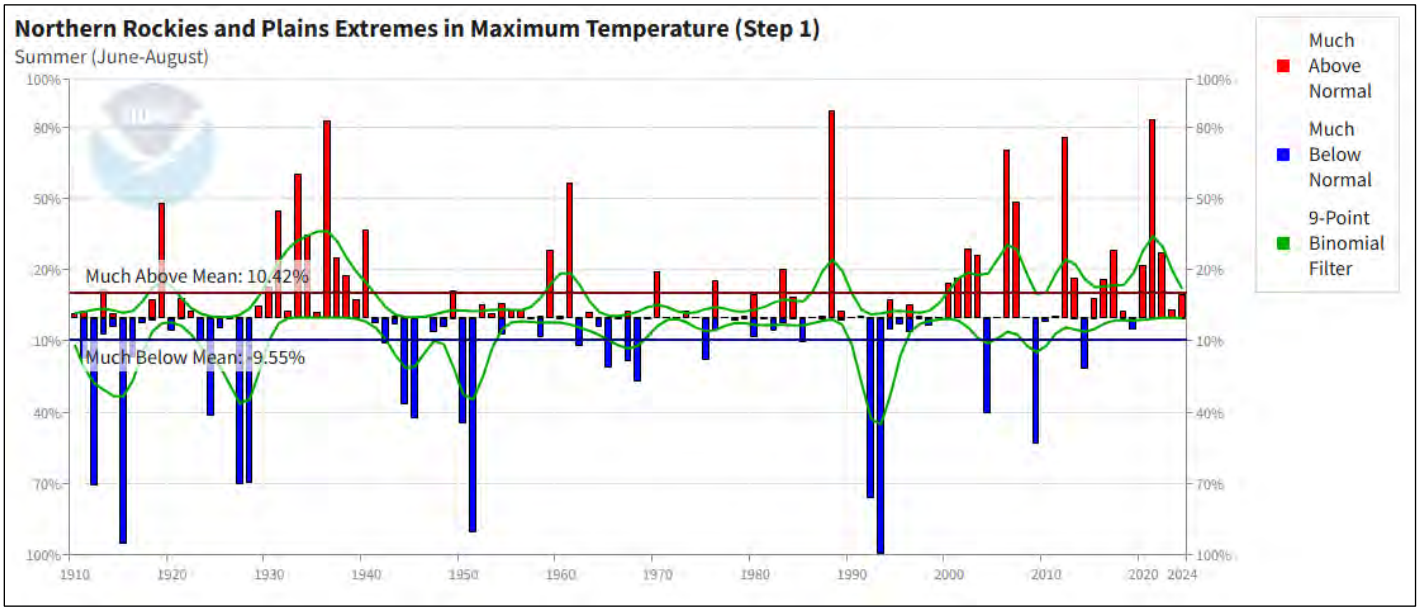
Excessive Heat

Location	Date	Type	Dth	Inj	PrD	CrD
BURLEIGH	07/16/2011	Excessive Heat	0	0	0.00K	0.00K
Totals:			0	0	0.00K	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 2024)

U.S. Climate Extremes Index (CEI)

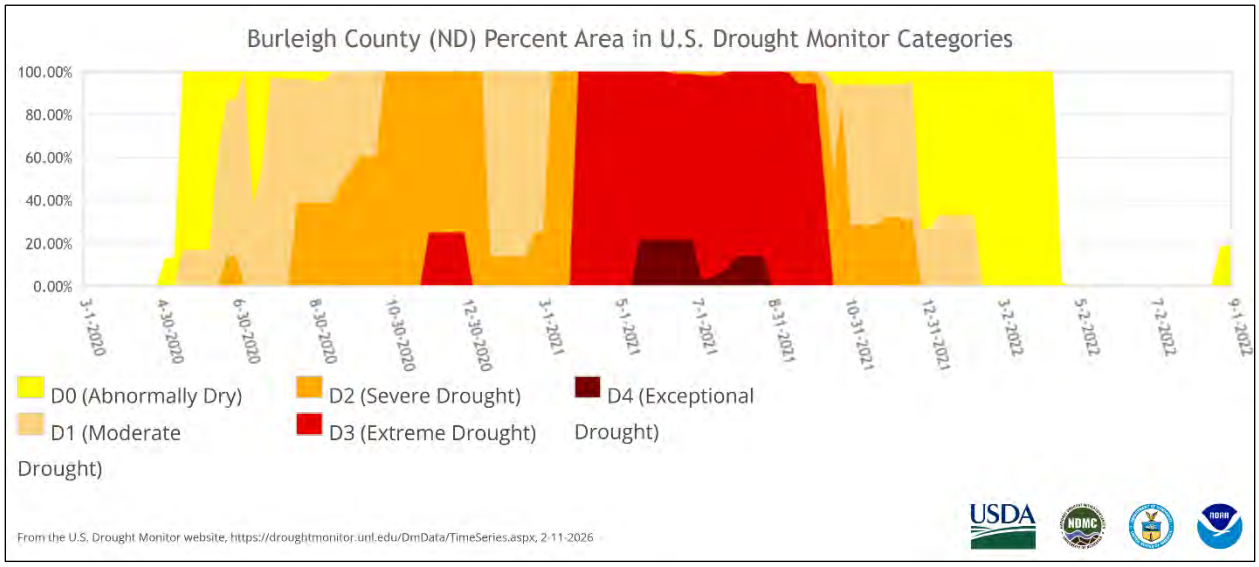
Extremes in maximum temperature for the period of Summer (June-August) from 1910-2024.



Source: National Centers for Environmental Information

United States Drought Monitor

The U.S. Drought Monitor started in 2000. The longest and most intense drought period in Burleigh County was 93 weeks (May 14-2020 through February 8, 2022).



Source: US Drought Monitor

Fire
(Including urban fire or structure collapse and wildland fire)

Frequency	Highly Likely (Nearly 100% probability in the next year)
Severity	Negligible (Less than 10 of jurisdiction affected)
Risk Class	C
Seasonal Pattern	None
Duration	Hours/Days
Speed of Onset	No warning
Location	Countywide

Descriptions
Source: National Fire Protection Association Glossary of Terms

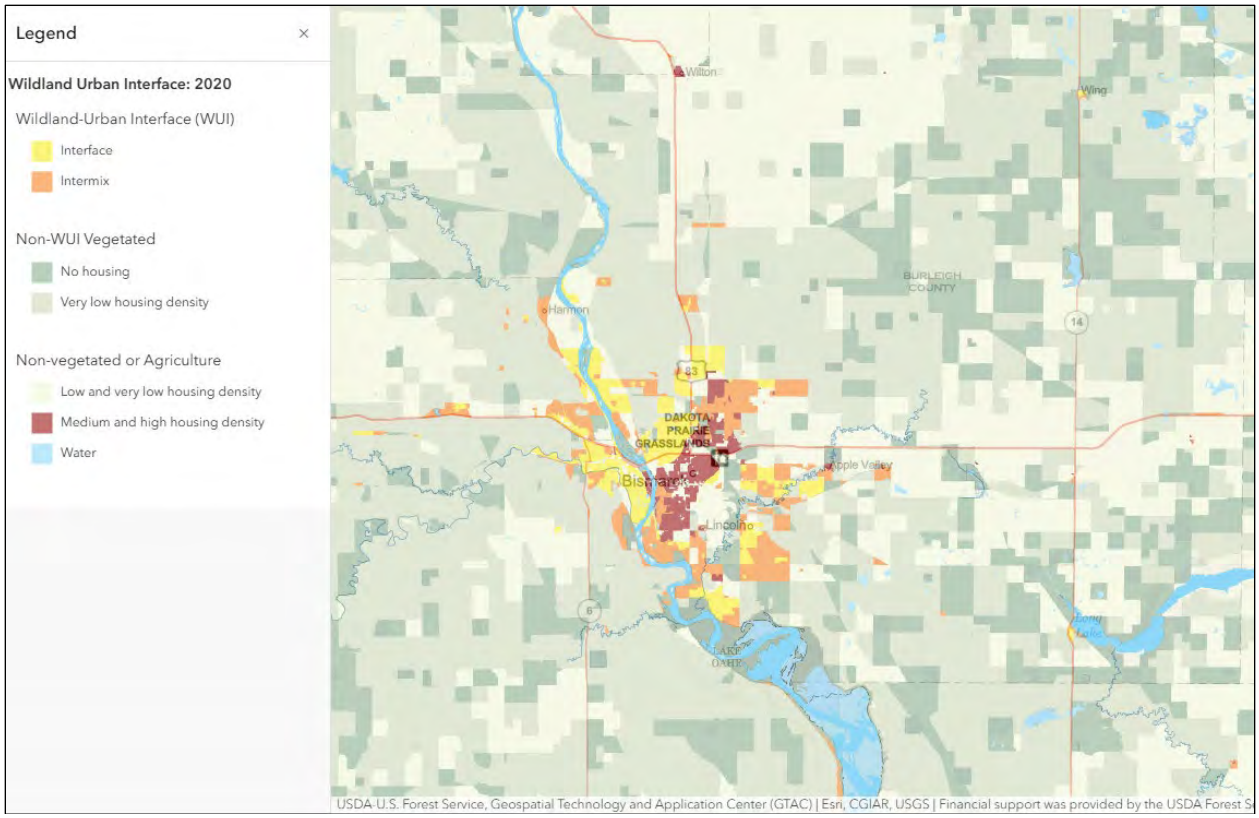
Urban
"An incorporated or unincorporated area with a population of over 30,000 people and/or a population density over 1,000 people per square mile but less than 2,999."

Structure Collapse (Fire Fighting)
"The activities of rescue, fire suppression, and property conservation in buildings or other structures, vehicles, rail cars, marine vessels, aircraft, or like properties."

Wildland Fire (Wildfire)
"An event dealing with a fire in the wildland; originating from an unplanned ignition, such as lightning, volcanos, unauthorized and accidental human-caused fires, and prescribed fires that are declared wildfires."

Wildland/Urban Interface
"A geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels, resulting in the potential for ignition of the structures within the area from flames or firebrands of a wildland fire."

Burleigh County Wildland Urban Interface



Source: USDA US Forest Service

Size Class of Fire

Class A - one-fourth acre or less;
Class B - more than one-fourth acre, but less than 10 acres;
Class C - 10 acres or more, but less than 100 acres;
Class D - 100 acres or more, but less than 300 acres;
Class E - 300 acres or more, but less than 1,000 acres;
Class F - 1,000 acres or more, but less than 5,000 acres;
Class G - 5,000 acres or more

Source: National Wildfire Coordinating Group (December 15, 2025)

Identified Impacts

- Blocked Roads
- Building Collapse
- Business Interruptions
- Delayed Emergency Response
- Downed Power Lines
- Downed Trees
- Evacuation (Localized)
- Explosion
- HAZMAT Release
- Increased Fire Potential
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Power
- Mass Casualties
- Property Damage
- School Closure

History

Urban fires are rare in occurrence and affect the more populated areas with the City of Bismarck having the highest population density.

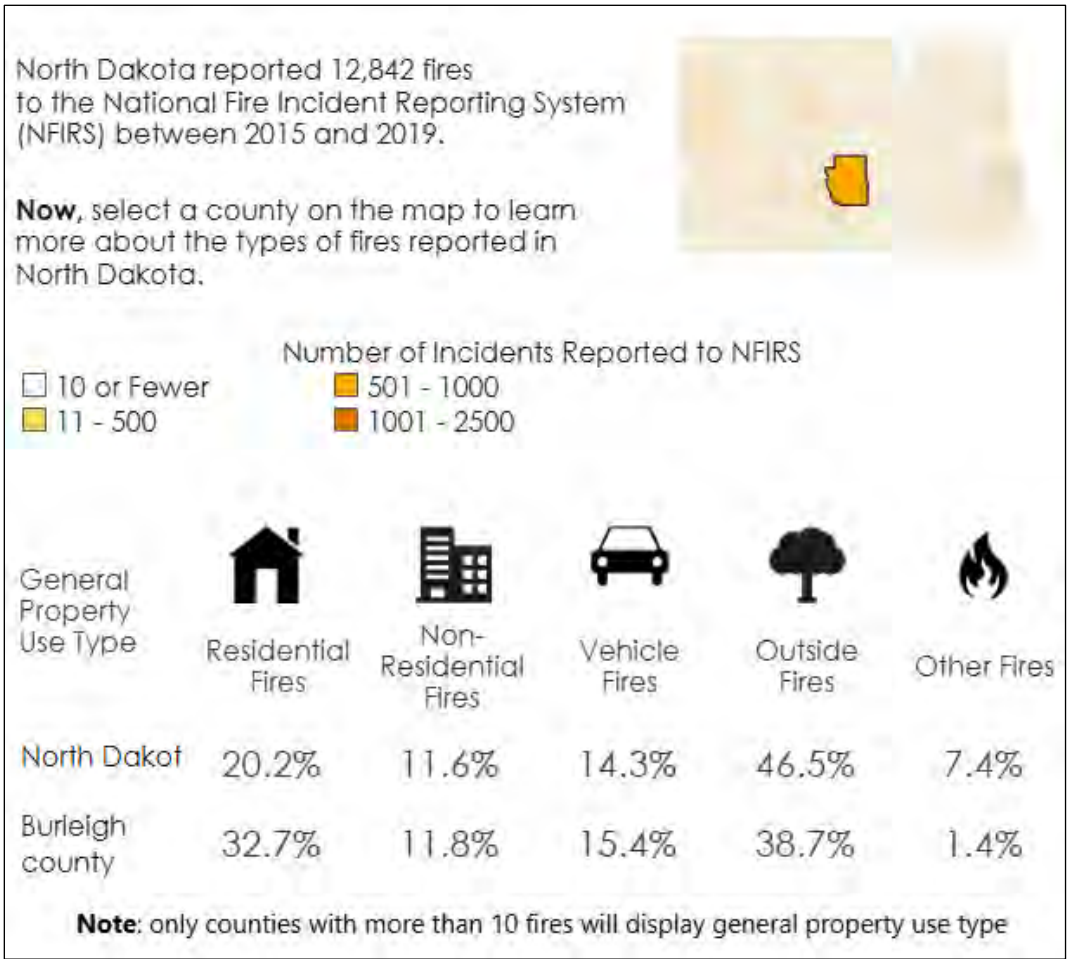
Rural Burleigh County experiences wildland fires every year. Factors influencing the potential include amounts and conditions of fuel supply (vegetation), temperatures, wind conditions, precipitation patterns, humidity levels, topography, and levels of human activity on the land.

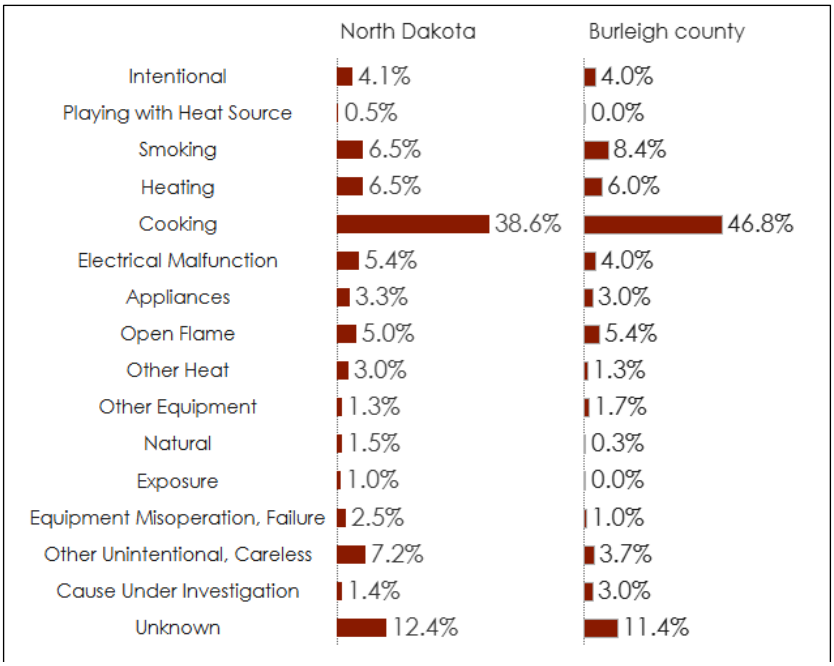
The main fire season normally begins when weather warms significantly, and precipitation is limited. This longer and more dangerous season extends until about October 30th or until the first significant snow cover.

Most wildland fires result from activities such as: controlled burns of sloughs, ditches, and fields by landowners; recreational activity such as camping, hunting, and other off-road vehicle travel; and use of fireworks preceding and immediately following the 4th of July.

Bismarck Rural Fire Department extinguishing a scheduled burn which got out of control at Hawktree Golf Course northwest of Bismarck (Source: The Bismarck Tribune, March 10, 2016).

National Fire Incident Reporting System (NFIRS)





Source: www.fema.gov

Location	Date	Time	Type	Dth	Inj	PrD	CrD
BURLEIGH	04/12/2015	17:00	Wildfire	0	0	200.00K	0.00K
BURLEIGH	07/18/2006	14:00	Wildfire	0	0	0.00K	0.00K
BURLEIGH	04/08/2005	14:00	Wildfire	0	3	0.00K	0.00K
BISMARCK	04/09/2003	14:14	Wildfire	0	1	0.00K	0.00K
MC KENZIE	03/24/2003	13:35	Wildfire	0	0	0.00K	0.00K
Totals:				0	4	200.00K	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 12/2024)

Several wildland fires occur annually; some of the more significant incidents are listed below:

October 12-13, 2024 – Recreational hunting cased a wildfire near Double Ditch involved 22 agencies including deployment of two ND National Guard Blackhawks and burned approximately 1,100 acres (no structures lost).

April 12-15, 2015 – An abandoned campfire developed into a large wildfire in southwest Burleigh County, south of Bismarck, by the afternoon of April 13th, which led to the evacuation of approximately 20 residences. It is believed that the fire initially started on April 12th. The fire was assumed contained the evening of April 13th and work was done to extinguish hot spots. The fire re-intensified on April 14th as relative humidity values dropped to around 15%, and southerly winds gusted to nearly 40 mph. This led to the evacuation of multiple neighborhoods south of the City of Bismarck, along with the University of Mary campus. The North Dakota Department of Health urged residents of Bismarck to use caution as the smoke was pushing over parts of the city. The fire was re-contained the evening of the 14th. Thirty-four separate agencies were involved in the wildfire response, and approximately 2,000 acres were burned. No lives or homes were lost. ND National Guard air support for fire suppression was utilized.

May 24, 2008 – A prescribed burn at the Long Lake Wildlife Refuge escaped containment, burning over 650 acres of private and refuge land.

July 18, 2006 - A fire, 15 miles north of Bismarck, quickly consumed 500 acres of vegetation after igniting in tall grass near a farmstead. The fire spread to the structures on the farm. Two barns, a granary, and corrals were lost to the fire before it was brought under control.

April 8, 2005 - Strong southerly winds gusting to 45 mph combine with low relative humidities and dry pastures, created red flag conditions in North Dakota. A large grass fire developed east of Wilton. The fire became very large in size, creating its own weather conditions. Winds shifted entrapping 3 rural firefighters. One firefighter suffered a broken leg while two others suffered second and third-degree burns.

April 9, 2003 – McLean Bottoms fire disaster (Burleigh and Emmons County). Wildland fire occurred on US Army Corps of Engineer land in Emmons County along the Missouri River. The fire continued to spread into Burleigh County on Corps land leased by North Dakota Game and Fish. Estimated 6,500 acres lost.

March 24, 2003 - Grass fire one mile north and one mile east of McKenzie (5700 NE 249th St).

Flood
(Including riverine, overland, and flash floods)

Frequency	Likely (10-100% probability in the next year, or at least 1 chance in next 10 years)
Severity	Limited (10-25% of jurisdiction affected)
Risk Class	C
Seasonal Pattern	Spring and Summer
Duration	1 to 10 days
Speed of Onset	More than 24 hours warning
Location	Countywide

Description
Flooding is the flow of water over normally dry land areas. It can be caused by the overflow of inland waters, heavier rainfall than normal during a particular period, snowmelt, or the runoff of surface waters from any source. Floods are typically a natural phenomenon but are often intensified by the alteration of natural conditions by human activities

Three types common to Burleigh County are Riverine, Overland, and Flash Flooding. Where Riverine is constrained to the river and creek channels and immediate area (flood when their levels rise enough to cover normally dry land areas), Overland and Flash Flooding (fast-moving, high volume of water flows into a normally dry area causing water levels to rapidly increase in a short period of time) can occur anywhere in the county. The main difference being that Flash Flooding has a more rapid onset (within 6 hours of the cause) and shorter duration (usually less than 12 hours) than Overland Flooding.

In simple terms, a flood is an excess of water on land that normally is dry. For example, water damage to your home from a river that overflowed into nearby streets and yards would be a direct result of flooding. (Source: Federal Emergency Management Agency, National Flood Insurance Program

What causes floods?

Flooding can happen anywhere, and at any time. Weather events commonly cause floods. Changes to the environment — like new buildings — and infrastructure failures — like a broken water main — can play a role, too.

Flood insurance covers many weather, environmental and infrastructure causes of floods, including:

- River, lake or coastal water overflows.
- Heavy or extensive rainfall.
- Melting snow and ice in spring.
- Changes to the land, such as new buildings and sidewalks or burned grass and trees after a wildfire.
- Water seeping through a dam, or levee or a broken water main.

Source: Federal Emergency Management Agency, National Flood Insurance Program

Flash Flood: Inundation or depth based on soil saturation and rainfall rate using Flash Flood Guidance.

Areal Flood: Inundation or depth based on saturation, rainfall, and inundation using Flash Flood Guidance.

Extent for Flash or Areal/Overland Flooding

Class	IBW Tag*	Description
Minor	Base (no tag)	Use most of the time, when flash (areal) flood impact damage is possible.
Moderate	Considerable	Use rarely, when there are indications flash (areal) flooding capable of unusual severity or impact is imminent or ongoing and urgent action is needed to protect lives and property.
Major	Catastrophic	Use exceedingly rarely, when a flash (areal) flood threat to life and catastrophic damage is occurring or is imminent, and floodwaters have risen or will rise to levels rarely if ever seen.

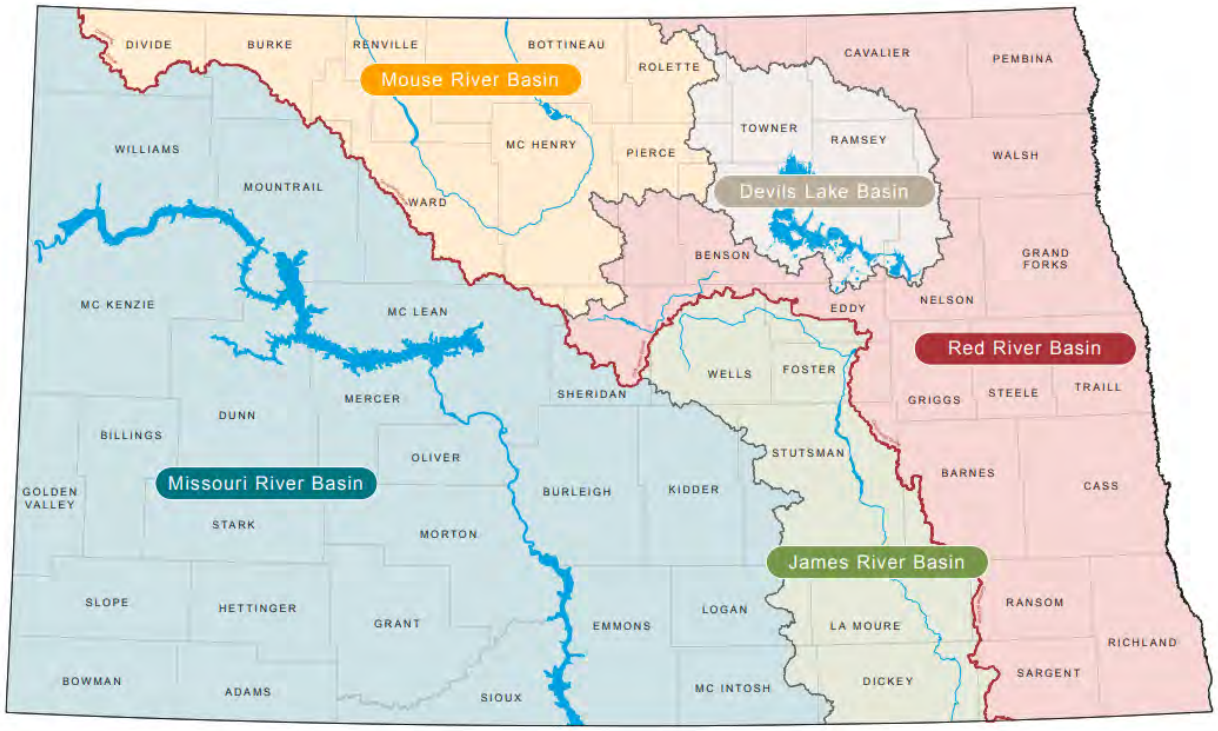
Missouri River Basin

The Missouri River was once free flowing with meandering braided channels, sand bars, and expansive tree-covered riparian areas. The river was free to make its own banks, which were ever changing, and seasonal flooding was a common occurrence.

Today, six dams and reservoir projects make up the Missouri River reservoir system. All of these dams were constructed by the federal government and are maintained and operated by the USACE for the following authorized purposes:

- Flood Control
- Water Supply
- Recreation
- Irrigation
- Hydropower
- Water Quality
- Fish and Wildlife
- Navigation

The first dam that was constructed was Fort Peck in Montana. Fort Peck was constructed under Congressional authorization from the Rivers and Harbors Act of 1935. The other five mainstem dams on the Missouri River were later built in cooperation between the USACE and the Bureau of Reclamation under the Pick-Sloan Plan. The Pick-Sloan Plan was part of the Flood Control Act of 1944. (Source: Missouri River Today Brochure)



Source: [ND Department of Water Resources]

Hydrologic Analyses

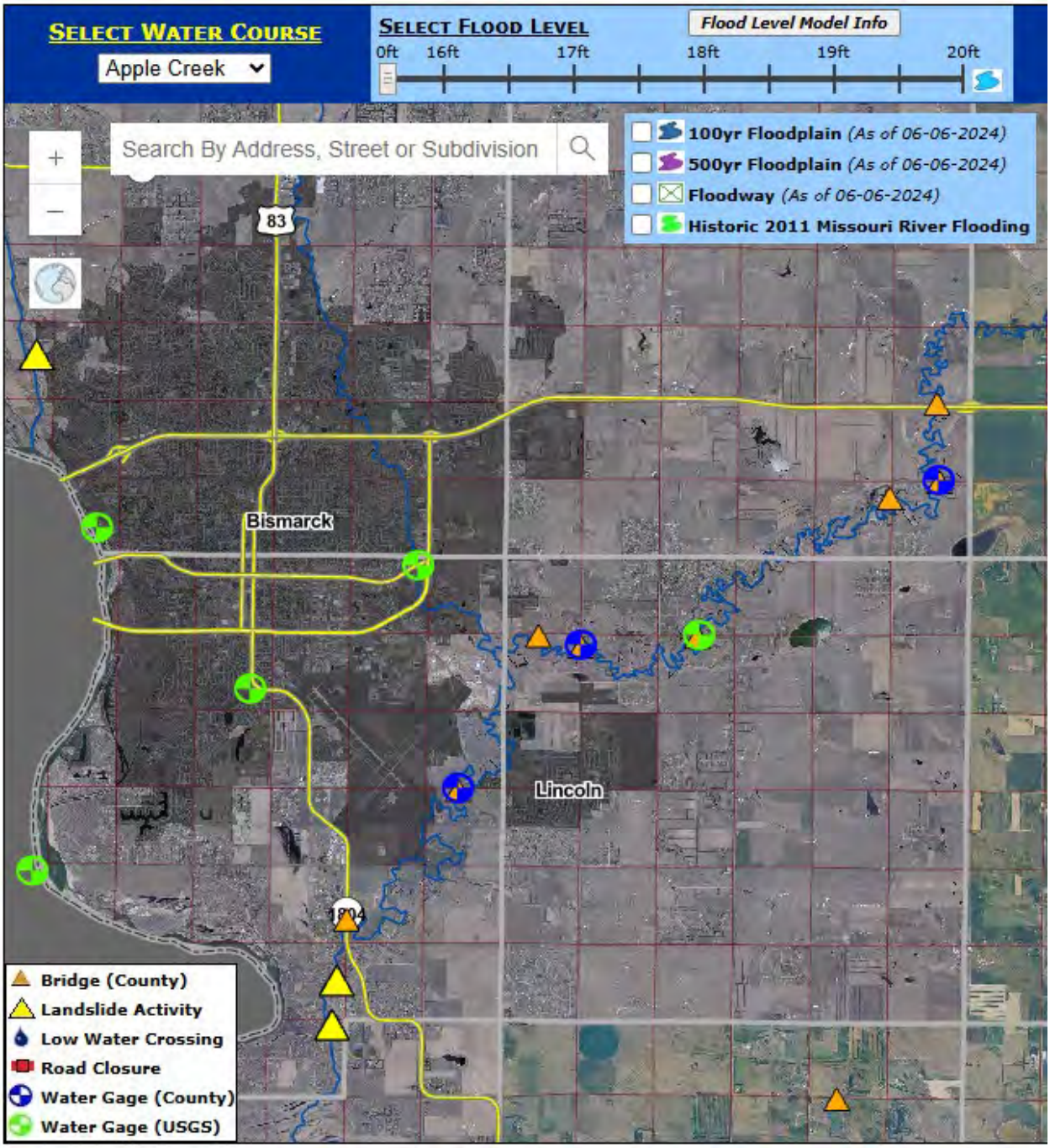
Hydrologic analyses were completed on the following areas as part of the Flood Insurance Study, Burleigh County, North Dakota, and Incorporated Areas, Revised: August 4, 2014 (available from the FEMA Map Service Center, Product 38015CV000B):

- Apple Creek
- Burnt Creek
- Grande Prairie Watersheds (Remmick, Grande Prairie Estates, Wachter)
- Hay Creek and North Valley Tributary
- Jackman Coulee
- Landfill Watershed
- Missouri River
- North 4th Street Watershed
- North Washington Street Watershed

Mapping

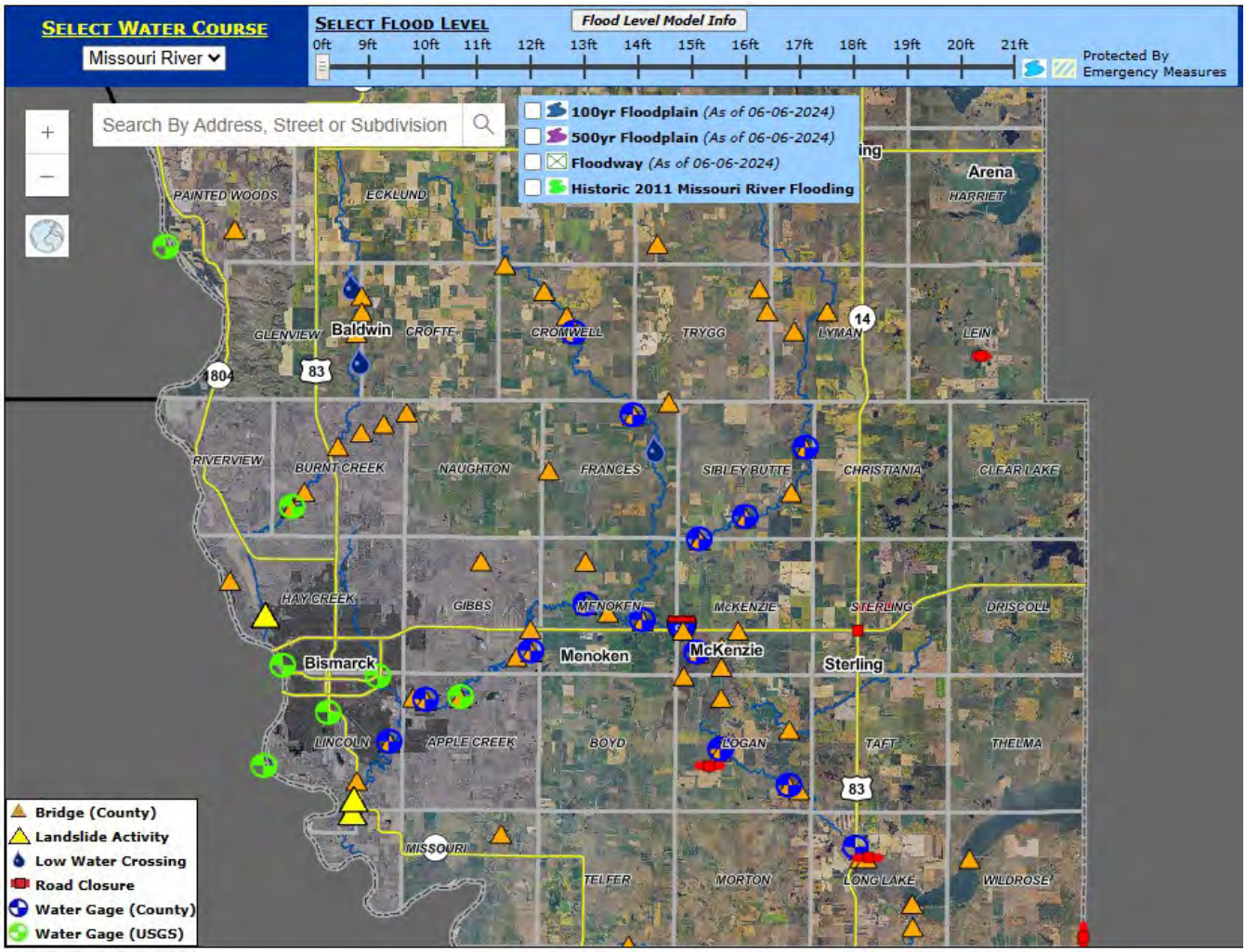
Burleigh County maintains a Flood & Elevation Tool for Apple Creek and the Missouri River which is intended to assist residents with data related to their location. An address can be entered in the search box, and they can toggle among different flood levels. In addition to flood stage levels, the following are also displayed: elevations, floodplains, tax parcels, road closures and water gages. https://www.burleighco.com/maps/apple-creek-flood-mapping/

Apple Creek



Source: Burleigh County Website

Missouri River

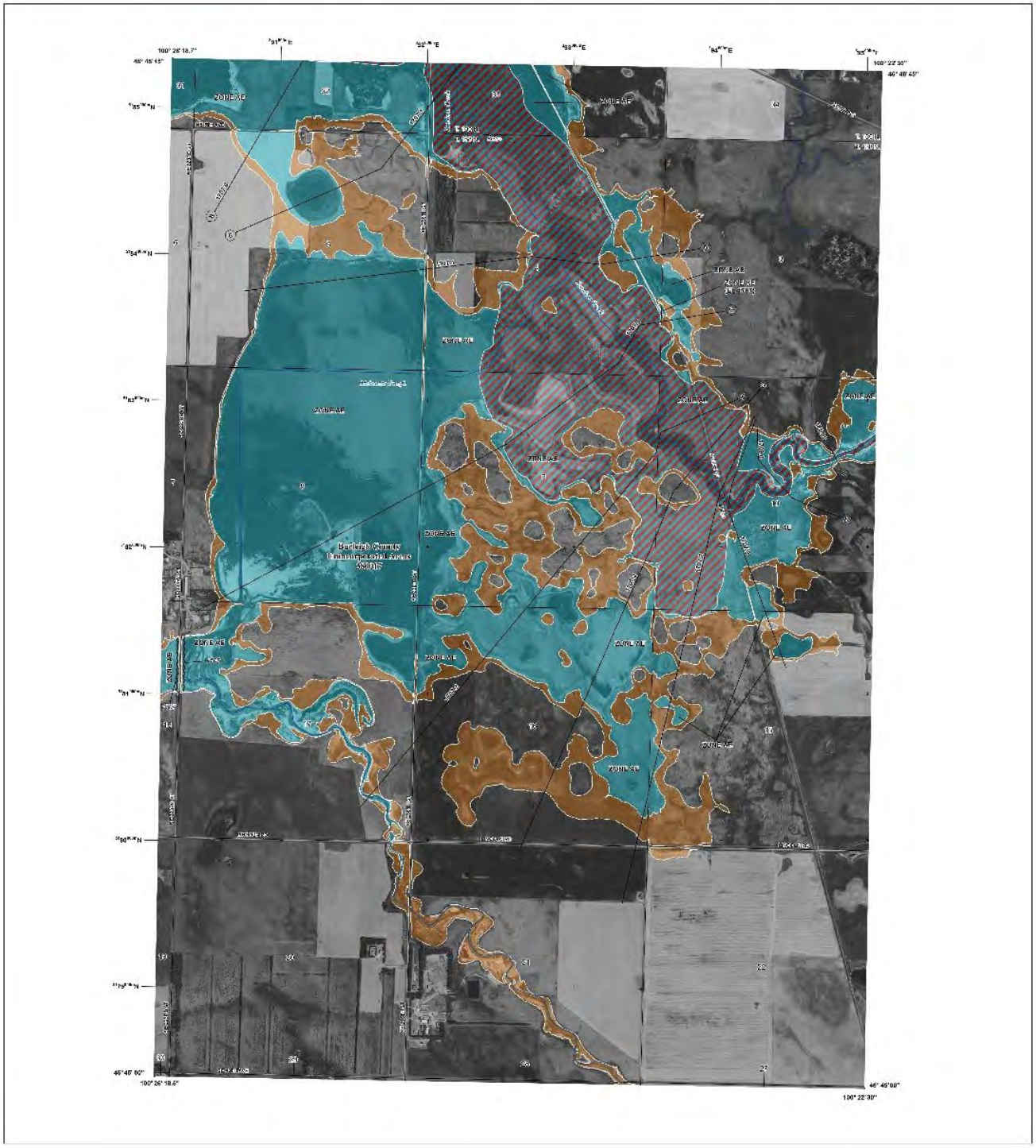


Source: [Burleigh County Website]

FEMA Map Service Center

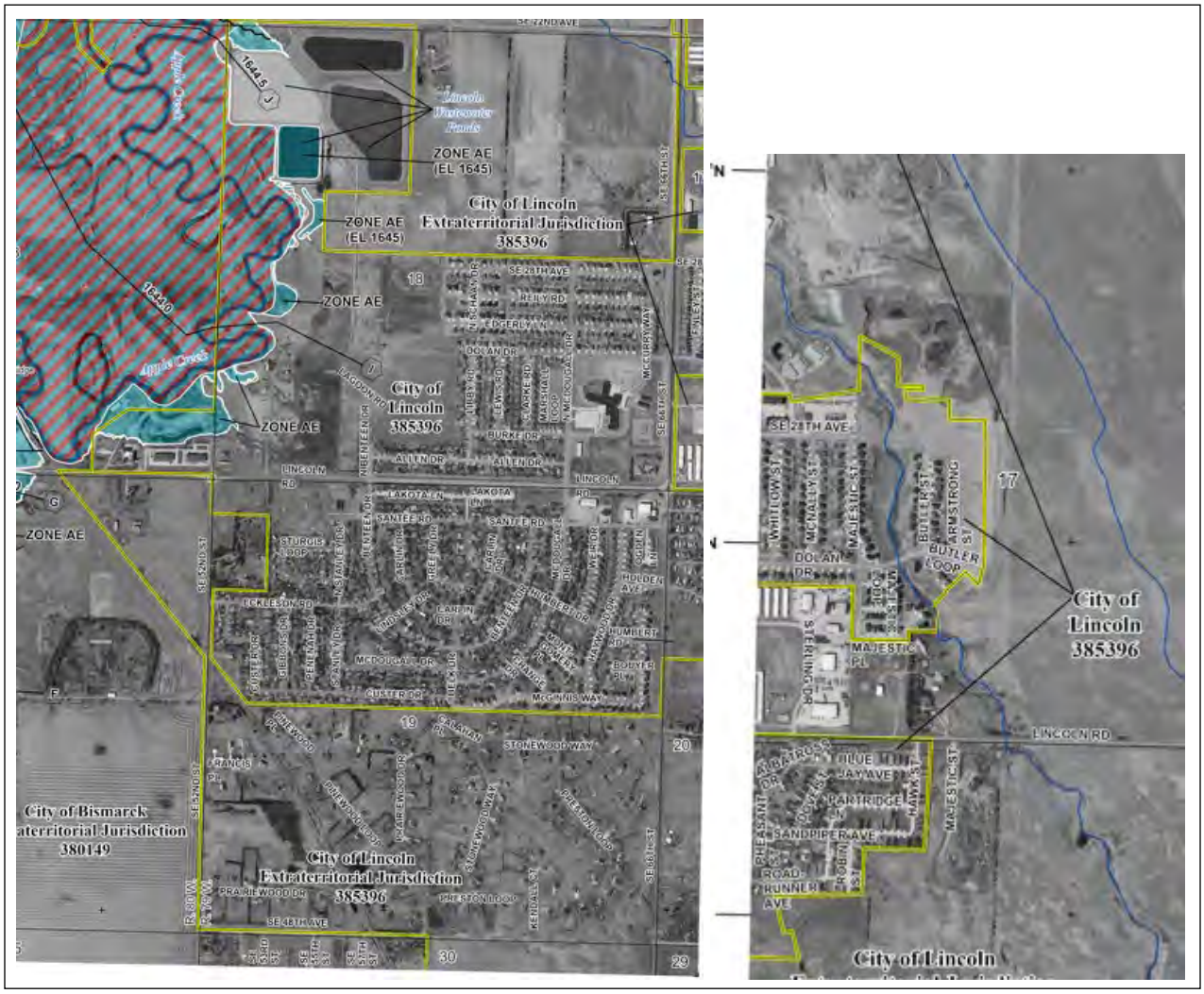
The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program (NFIP). Use the MSC to find your official flood map, access a range of other flood hazard products, and take advantage of tools for better understanding flood risk.

Burleigh County



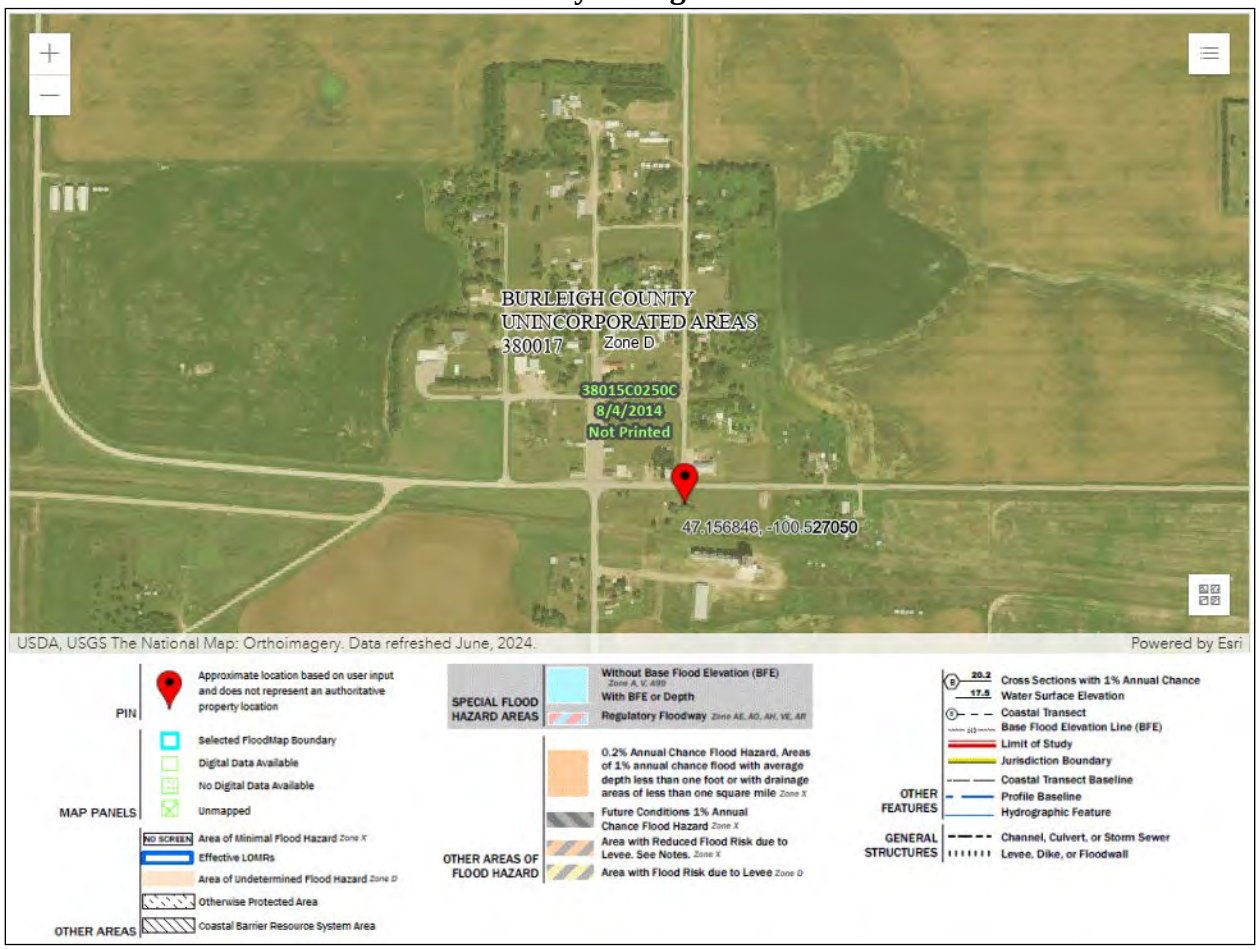
Burleigh County has 43 Flood Insurance Rate Map Panels
Source: FEMA Map Service Center
County Map also shown in Attachments

City of Lincoln



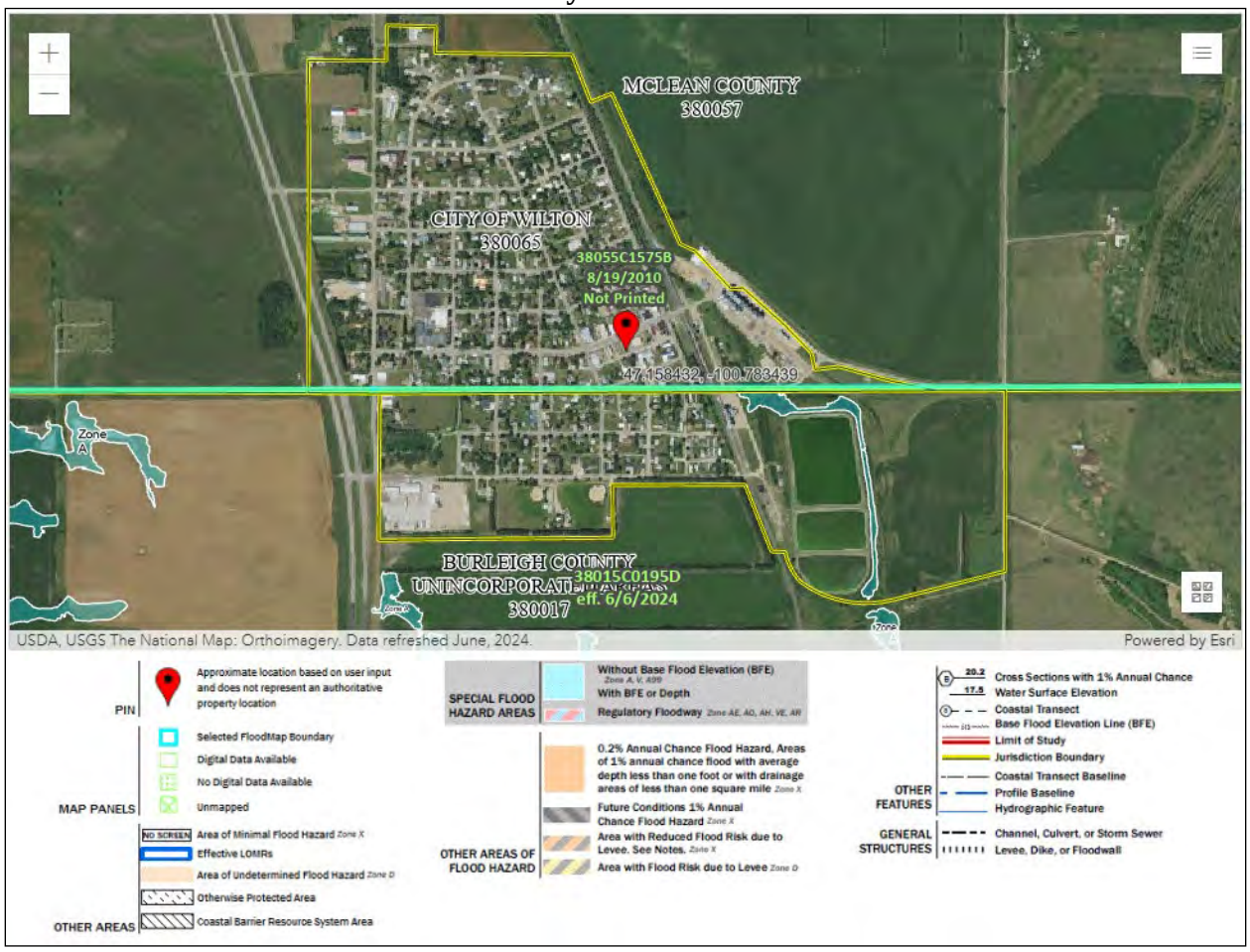
Source: [FEMA Map Service Center]

City of Regan



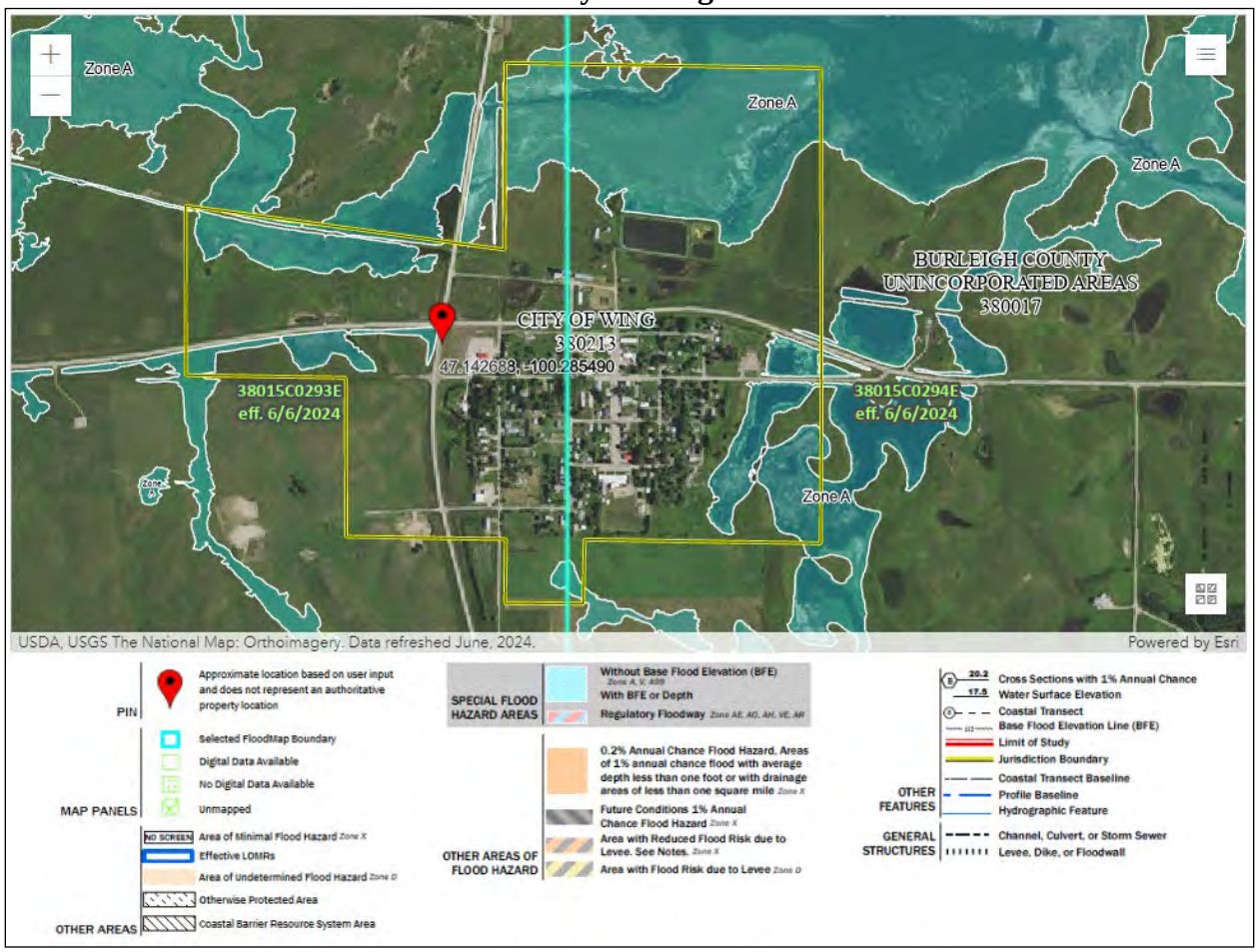
Source: [FEMA Map Service Center]

City of Wilton



Source: [FEMA Map Service Center]

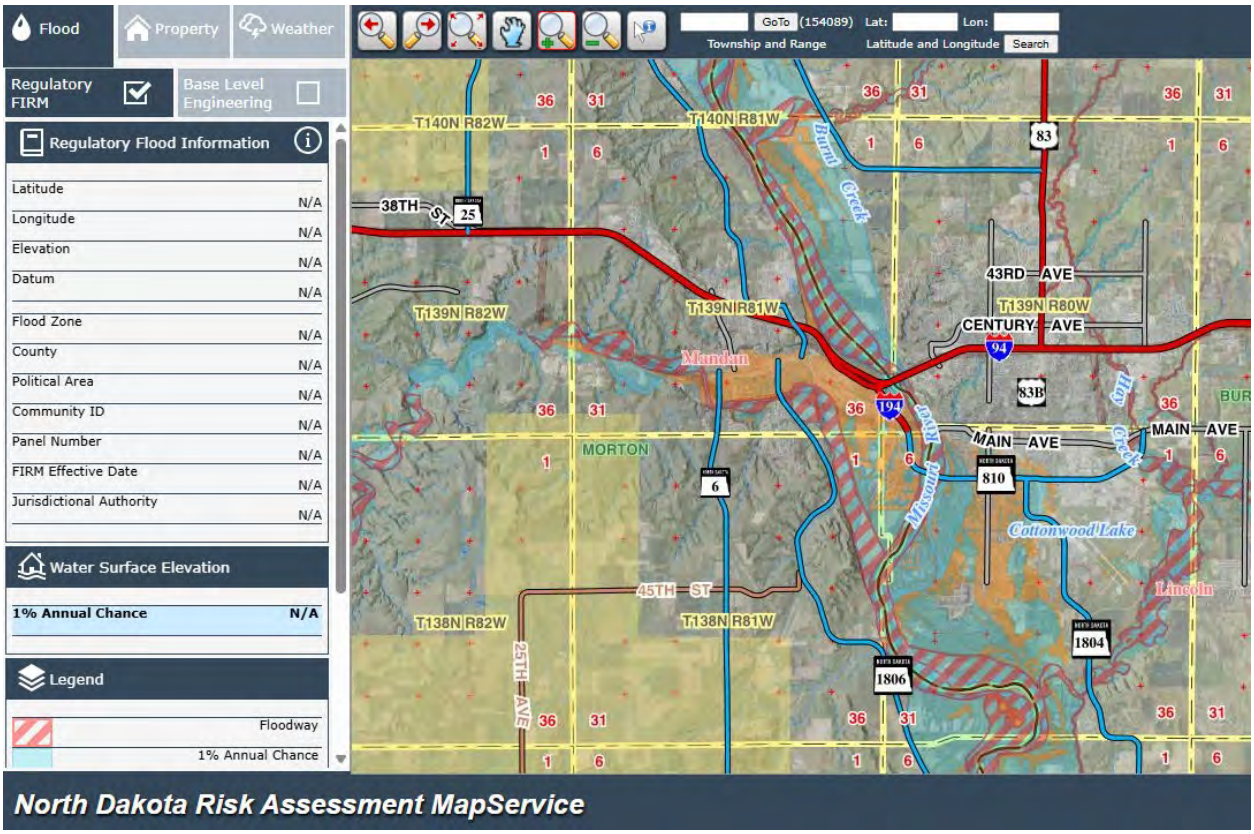
City of Wing



Source: [FEMA Map Service Center]

ND Risk Assessment Map Service (NDRAM)

NDRAM allows users to zoom in and visually display current flood risks, both approximate floodplains from BLE and effective regulatory floodplains from FEMA's NFIP. This new tool also provides users with water surface elevations, flood depths, and the ability to download engineering model data and print customized maps making it useful for planning, mitigation, and disaster recovery actions.



Source: NDRAM

Identified Impacts
Short-duration, high-intensity spring rainstorms, in combination with snowmelt and ice jams, are a cause of flooding on the Missouri River and Burnt and Apple Creeks in Burleigh County. High-intensity summer rainstorms also cause minor flooding on Burnt and Apple Creeks.

Floodplains consist primarily of cropland and open rangeland with some brushy and wooded areas along the Missouri River bottoms. Some roads and residential and commercial facilities are in the Missouri River floodplain, particularly in the area south of the City of Bismarck.

(Source: Flood Insurance Study, Burleigh County, North Dakota, and Incorporated Areas, Revised: August 4, 2014 available from the FEMA Map Service Center, Product 38015CV000B)

- Blocked Roads
- Building Collapse
- Business Interruptions
- Delayed Emergency Response
- Downed Power Lines
- Downed Trees
- Evacuation (Localized)
- Flooding (Street)
- Flooding (Structure)
- HAZMAT Release
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Potable Water
- Loss of Power
- Mass Casualties
- Property Damage
- School Closure
- Sewer Backup

History

Flood

Location	Date	Time	Type	Dth	Inj	PrD	CrD
WILTON	08/01/2011	00:00	Flood	0	0	0.00K	0.00K
WILTON	07/01/2011	00:00	Flood	0	0	0.00K	0.00K
WILTON	06/02/2011	00:00	Flood	0	0	20.000M	0.00K
WILTON	04/01/2009	00:00	Flood	0	0	558.00K	0.00K
WILTON	03/06/2009	00:00	Flood	0	0	530.00K	0.00K
MENOKEN	06/07/2007	00:00	Flood	0	0	50.00K	100.00K
BISMARCK	08/31/2002	19:05	Flood	0	0	0.00K	0.00K
BISMARCK	07/27/2001	02:00	Flood	0	0	0.00K	0.00K
BISMARCK	07/26/2001	22:00	Flood	0	0	0.00K	0.00K
BURLEIGH	02/26/2000	11:58	Flood	0	0	0.00K	0.00K
BISMARCK ARPT	08/12/1999	00:00	Flood	0	0	0.00K	0.00K
BURLEIGH	03/20/1999	09:00	Flood	0	0	0.00K	0.00K
BURLEIGH	03/21/1997	08:00	Flood	0	0	150.00K	0.00K
Totals:				0	0	21.288M	100.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1996 to 12/2024)

Significant events include:

March 30, 2019 – Apple Creek crested at 16.37' (Moderate Flood Stage is 16') after a period of rapid thaw. Self-fill sandbag sites were established, and several roads were closed to include Apple Creek Road (between 80th St SE and 93rd St SE). Apple Valley Subdivision experienced water encroachment, and the Apple Creek Golf Course was inundated.

Photo Credit: Burleigh County Sheriff's Department

2011 - Since the construction of Garrison Dam, the 2011 flood event is the flood of record with a peak mean daily discharge of 154,000. This event occurred as a result of high mountain snow pack and a very significant and widely distributed system that brought extensive rain throughout eastern Montana. Prior to the 2011 event, the maximum peak discharge that has occurred since 1953 on the Missouri River was 68,900 cubic feet per second (cfs). This occurred on July 13, 1975. Prior to the 2011 event, the highest record of flooding at the Bismarck stream gage since the completion of Garrison Dam was 16.11 feet (1634.39 NGVD 29), which occurred in March of 2009, because of ice conditions and ice jams.

June 26, 2009 - One to three inches of rain fell over the Bismarck area in 45 minutes. The heaviest rainfall occurred across northern sections of the city. This resulted in widespread street flooding and overturned manhole covers. A few homes suffered water damage to basements. Property damage estimated at $25K.

February 25, 2009 - An ice jam on the Missouri River at Bismarck, and recent melting snow, caused a drainage canal to back up and overflow into south Bismarck. This occurred in the vicinity of University Drive and Wachter Avenue, and for several blocks around there. Damage was mostly confined to a mobile home park, which was lower in elevation than the surrounding terrain. The homes were elevated within the park and so damage was minimal. Bismarck city crews took action that resulted in the flood waters receding. Property damage estimated at $20K.

June 12, 2007 - Very heavy rain of 2.50 inches fell in 30 minutes time 7 miles south of Driscoll. A total of 4.50 inches of rain was measured 2 miles northeast of Driscoll. Water was reportedly standing everywhere and water covered roads including in the city of Driscoll. Several roads were washed out. Water was up to 4 inches deep in some homes basements in Driscoll. In the early afternoon of Tuesday June 12th, Tornado Watch 389 was issued in anticipation of severe thunderstorms developing during the afternoon hours. Several severe thunderstorm and tornado warnings were issued. One report of a severe thunderstorm wind gust and two confirmed tornado reports were received during the mid-afternoon hours. In addition, very heavy rain fell over large portions of central North Dakota, prompting several flash flood warnings during the late afternoon and early evening hours. Began 2 Miles North East of Driscoll and ended 7 Miles South West of Driscoll. Property damage estimated at $250K, crop damage estimated at $50K.

June 7, 2007 - Several county roads were closed due to water over them. Low lying areas north of Menoken were flooded with water standing in fields. Thunderstorms followed by showers and then areas of steady rain on June 6 and 7 resulted in flooding in parts of southern North Dakota. Five to six (5 to 6) inches of rain was common over the two day period, 10 Miles North of Menoken. Property damage estimated at $50K, crop damage estimated at $100K.

August 23, 2004 - Streets and underpasses flooded causing several major arteries to be closed. Water flowed across yards and into several basements of homes.

July 27, 2001 - Rainfall of 3 to 4 inches over Bismarck caused flooding of streets and underpasses. Many back roads near the Missouri River were water covered at times and a few washed out. Two mudslides on River Road covered the northbound lanes.

July 26, 2001 - Around 2 inches of rain fell in a very short time causing street flooding and pooling of water in Bismarck.

June 9, 2001 - Widespread street flooding throughout the City of Bismarck with a foot or more of water covered the roads. Travel not advised. Up to 12 feet of water accumulated in the railroad underpasses in town.

February 26, 2000 – Rapid snowmelt and heavy rain resulted in extensive runoff throughout Burleigh County. Unseasonably warm temperatures, as well as frozen grounds and ice and snow plugged culverts, also factored into the extensive runoff. Fifteen roadways were overtopped by runoff resulting in closure of these roads. Apple Creek near Menoken rose 10 feet from February 25th through the 27th weekend, cresting 16.6 feet. The flood stage is 15 feet. The flood warning remained in effect until March 1st, 2000 when levels fell below flood stage.

August 12, 1999 – Periods of heavy rainfall ranging from 4 to 7 inches saturated much of Morton and Burleigh counties. Hardest impact was felt in the cities of Bismarck and Mandan. Two hundred twenty one (221) homes and businesses received water damage. Twelve (12) road sites were damaged and a significant mudslide closed portions of Highway 1804 in north Bismarck.

March 20, 1999 – Flooding along Apple Creek near the City of Menoken in Burleigh County due to snowmelt and ice jams resulted in washed out roads and flooded fields. Many roads near the river were closed and barricaded. The flood stage on Apple Creek is 15 feet. The river crested at 16.2 feet on the evening of the 24th.

Source: National Oceanic and Atmospheric Administration National Climatic Data Center Website (01/1950 to 10/31/2019)

Special Flood Hazard Areas (SFHA) are land areas identified by FEMA that will be inundated by a flood event with a 1% chance of being equaled or exceeded in any given year. These areas, also called the 100-year floodplains, have high flood risk and are subject to mandatory flood insurance requirements for properties with federally backed mortgages. SFHAs are depicted on Flood Insurance Rate Maps (FIRMs) with designations typically including the letter "A" or "V". Portions of unincorporated Burleigh County, City of Bismarck, City of Lincoln, and the City of Wing include SFHAs.

Floodplain administrators follow the permitting ordinances outlined by the NFIP Guidance and North Dakota Century Code 81-16.2 Floodplain Management. After an event, NFIP "substantial damage" is when the cost of repairing a damaged building is 50% or more of its market value before the damage. This determination is made by the floodplain administrator and triggers a requirement that the building be brought up to current floodplain management standards to be repaired or rebuilt.

Burleigh County encourages property owners to purchase flood insurance through the National Flood Insurance Program (NFIP).

Repetitive loss structure means a structure covered under an NFIP flood insurance policy that has incurred flood-related damage on two occasions, in which the cost of repair, on average, equaled or exceeded 25% of the value of the structure at the time of each such flood event; and at the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage. (44 CFR § 77.2(i)) Burleigh County has 32 repetitive loss properties (25 are within the City of Bismarck). All properties are classified as single-family residences.

Severe repetitive loss structure means a structure that is covered under an NFIP flood insurance policy and has incurred flood-related damage for which four or more separate claims have been made under flood insurance coverage, with the amount of each claim (including building and contents payments) exceeding $5,000 and with the cumulative amount of such claims payments exceeding $20,000; or for which at least two separate flood insurance claims payments (building payments only) have been made, with cumulative amount of such claims exceeding the value of the insured structure. (44 CFR § 77.2(j)) There are no severe repetitive loss properties in Burleigh County.

May 30, 2024: Burleigh County Flood Ordinance changed to align with NFIP and City of Bismarck Flood Ordinances (Amendment 24-003 – Article 21 – FP – Floodplain) and updated date of Flood Insurance Study

April 4, 2024: City of Lincoln Ordinance 9-03-12 Floodplain District key changes include detailed definitions, administrative procedures, permit requirements, elevation standards, construction methods, accessory structure guidelines, and appeal/variance procedures. The overall effect is an increase in technical specificity, safety, and regulatory clarity for floodplain management within Lincoln.

Flood insurance is available to property owners whose jurisdiction participates in the NFIP.

FEMA

Community Status Book Report

Communities Participating in the National Flood Program

Select here for not participating

NORTH DAKOTA

CID	Community Name	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	CRS Entry Date	Curr Eff Date	Curr Class	% Disc
380149C	BISMARCK, CITY OF	11/8/1974	9/18/1985	6/6/2024	9/18/1985	10/1/2017	4/1/2023	7	15%
380017C	BURLEIGH COUNTY *	7/19/2005	9/18/1985	6/6/2024	9/18/1985				
	INCLUDES ALL UNORGANIZED TOWNSHIPS AND ORGANIZED TOWNSHIPS OF APPLE CREEK, CLEAR LAKE, CROFTE, GIBBS, GLENVIEW, HAY CREEK, MENOKEN, PAINTED WOODS								
385396C	LINCOLN, CITY OF	7/19/2005	7/19/2005	6/6/2024	5/12/2008				
380065B	WILTON, CITY OF	11/14/1975	7/19/2005	6/6/2024	4/25/1997				
380213C	WING, CITY OF	6/27/1974	8/19/1980	6/6/2024	8/19/1980				

Source: FEMA.gov

Floodplain Administrators

JURISDICTION	ADMINISTRATOR - NAME	POSITION
BURLEIGH COUNTY	MITCH FLANAGAN	BUILDING OFFICIAL/DIRECTOR
CITY OF BISMARCK	BRADY BLASKOWSKI	BUILDING INSPECTIONS
CITY OF BISMARCK	JENNY WOLLMUTH	PLANNER
CITY OF LINCOLN	MITCH FLANAGAN	BUILDING OFFICIAL/DIRECTOR
CITY OF WING	JOELL SNYDER	SUPERVISOR
CITY OF WILTON	PATTIE SOLBERG	AUDITOR

Source: ND Department of Water Resources

Burleigh County continues to foster participation from the City of Regan. Additional NFIP strategies are listed in the Appendices.

Vulnerability is further addressed utilizing the Burleigh County Damage Estimator to determine estimate population, critical infrastructure, and structures impacted with assessed value for flood inundation.

Geologic Hazards

(Including erosion, expansive soils, landslides, radon, subsidence, earthquake)

Frequency	Nearly 100% probability in the next year
Severity	Negligible (Less than 10% of jurisdiction affected)
Risk Class	C
Seasonal Pattern	Spring and Summer
Duration	1 to 10 days
Speed of Onset	Hours to days
Location	Countywide (areas variable by sub-type)

Description

Erosion is the geological process of wearing away and transporting soil, rock, and sediment by natural forces—primarily water, wind, ice, and gravity.

Water related erosion can be exacerbated by periods of intense rainfall, rapid river rises, or overland flooding. Both wind and water erosion can increase during and after periods of drought or following wildland fire scarring, as natural vegetative cover is removed.

The exposure to Soil Erosion is countywide, but primarily driven by those locations where dirt is exposed to strong winds, hard rains, and flowing water. According to the Natural Resources Defense Council (Mulvihill, 2021), “Soil erosion occurs primarily when dirt is left exposed to strong winds, hard rains, and flowing water. In some cases, human activities, especially farming and land clearing, leave soil vulnerable to erosion. For example, when farmers till (plow) the soil before or after growing a season of crops, they may leave it exposed to the elements for weeks or months. The overgrazing of farm animals like cattle and sheep can also leave large areas of land devoid of ground-covering plants that would otherwise hold the soil in place.” According to the USGS (2025), recent wildfires can increase the risk of both wind and water erosion by removing groundcover, exposing fragile topsoil, and even changing the nature of the topsoil particles, making them more susceptible to erosion.

Soil Loss Tolerance tons/acres/year	Acres	% of County
2	160,682	15.05%
3	106,395	9.96%
4	1,317	0.12%
5	766,237	71.76%
<Null>	33,127	3.10%
Total for Burleigh County	1,067,758	100.00%

Water Erosion Potential	Acres	Percent
Very low water erosion potential	437,448	40.97%
Low water erosion potential	471,309	44.14%
Moderate water erosion potential	57,460	5.38%
High water erosion potential	69,027	6.46%
Very high water erosion potential	1,381	0.13%
Not rated	31,133	2.92%
Total for Burleigh County	1,067,758	100.00%

Wind Erosion Potential	Acres	Percent
Not limited	676,740	63.38%
Somewhat limited	98,177	9.19%
Very limited	292,841	27.43%
Total for Burleigh County	1,067,758	100.00%

Source: USDA – Bismarck Field Office

Expansive Soils

Expansive soils, primarily composed of expansive clay, are a notable geological factor in Burleigh County, particularly in areas like Bismarck. These soils undergo significant volume changes—swelling when wet and shrinking when dry—which can lead to structural damage if not properly managed.

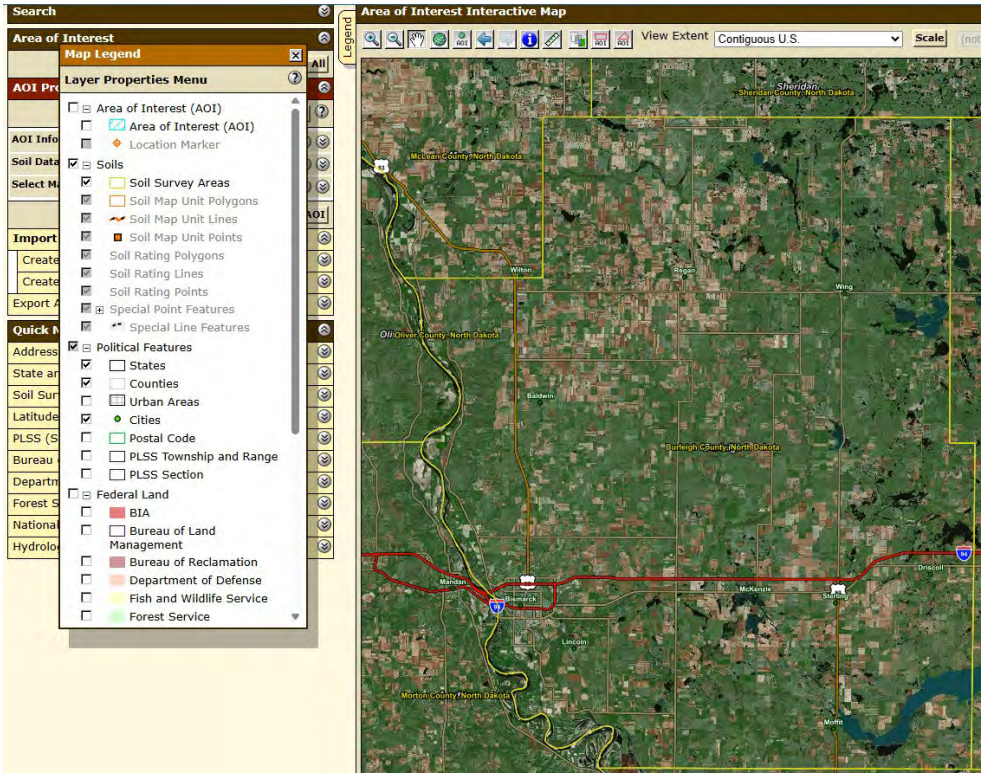
Through the end of this century in North Dakota, expect more frequent, larger, and more intense geologic hazards, such as landslides, riverbank collapse, sink holes, and expansive (clay) soils. Both Drought and Heavy Precipitation events are projected to occur more frequently, which is expected to contribute to an increased frequency of expansive soils alternately cracking and swelling, landslides where steep slopes are present, or to riverbank collapse where undercutting due to subsoil flow and/or antecedent flooding is possible. Both extremes also increase the potential for wind and water erosion. Increased development pressure and the impacts of future climate conditions may increase the risk to a variety of state infrastructure and assets if constructed or situated in areas prone to geologic hazards.

Burleigh County is in the glaciated Missouri Plateau Section, with the northeast corner of the state in the Missouri Coteau District and the remainder in the Coteau Slope District (Kume and Hansen, 1965; Stout, 1974). According to Kume (1965), “The soils of Burleigh County are classified in the Chestnut soil group, a dark brown soil of the cool and temperate, subhumid to semiarid grasslands. The county can be divided into a southern and northwestern occurrence of dark brown soils separated by a northeastern, central western, and adjacent to Missouri River occurrence of the hilly and steep soils. The dark brown soils are loam and silt loam underlain by a light colored lime (alkali) accumulation. The hilly and steep soils on crests of hills and on steep slopes have a black or very dark brown surface layer but lack a subsoil, and the lime accumulation is very shallow.”

Expressed as a characteristic of the relative clay-mineral content in the soil. In engineering and agriculture applications this may be the Shrink-Swell Class, a Linear Extensibility Percent (LE/LEP), or a Coefficient of Linear Extensibility (CL/COLE). Expansive/contractive soils can produce soil heaving/cracking during protracted wet/dry conditions. According to Wikipedia (Shrink-swell capacity, 2025), cracking soils can break critical plant root structure leading to crop failures. Bridges, roadbeds, building foundations, and pipelines can fail due to the heaving, settling, or cracking of soils.

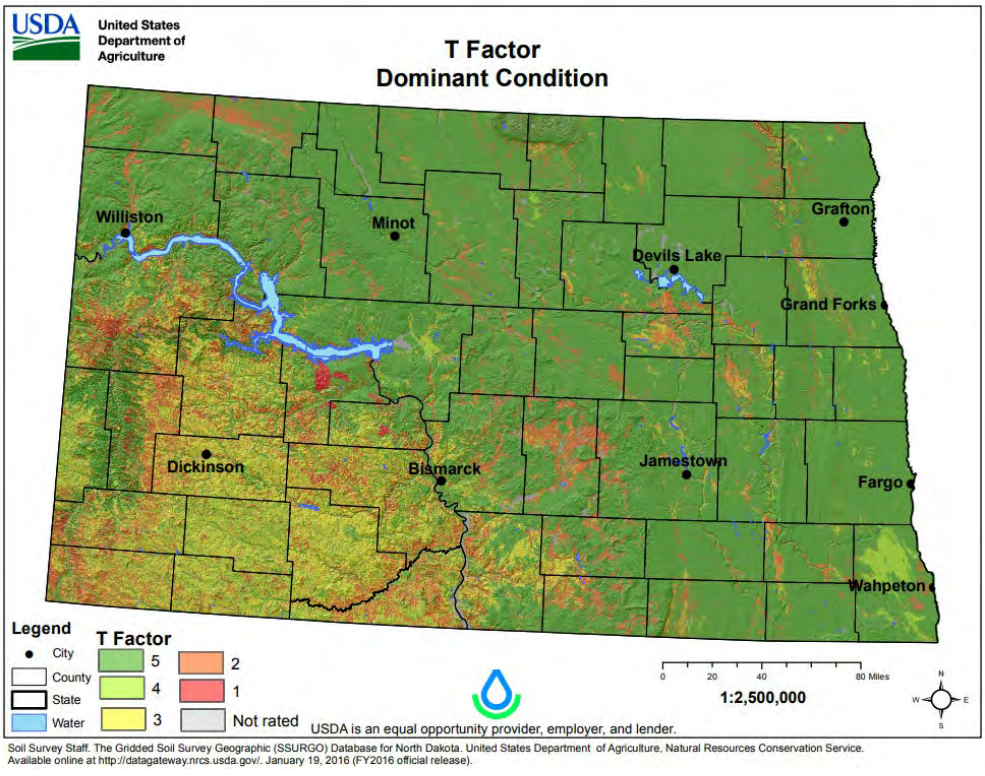
Shrink-Swell Class	LEP	COLE
Low	< 3.0	< 0.03
Moderate	3.0–5.9	0.03–0.06
High	6.0–8.9	0.06–0.09
Very High	≥ 9.0	≥ 0.09

Source: NRCS/USDA National Soil Survey Handbook, Page 57



Source: [Web Soil Survey]

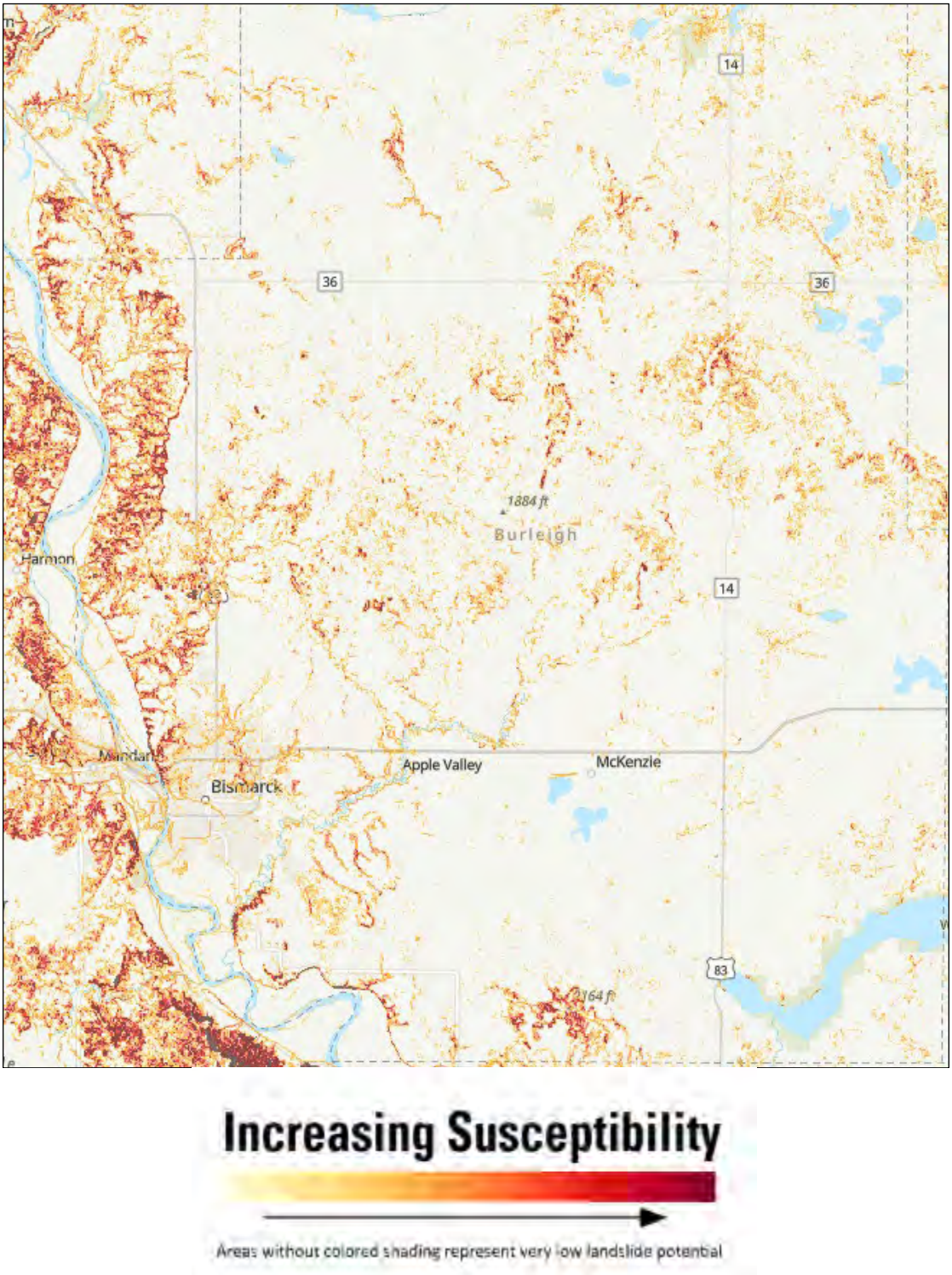
The T factor is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.



Source: [USDA]

Landslide

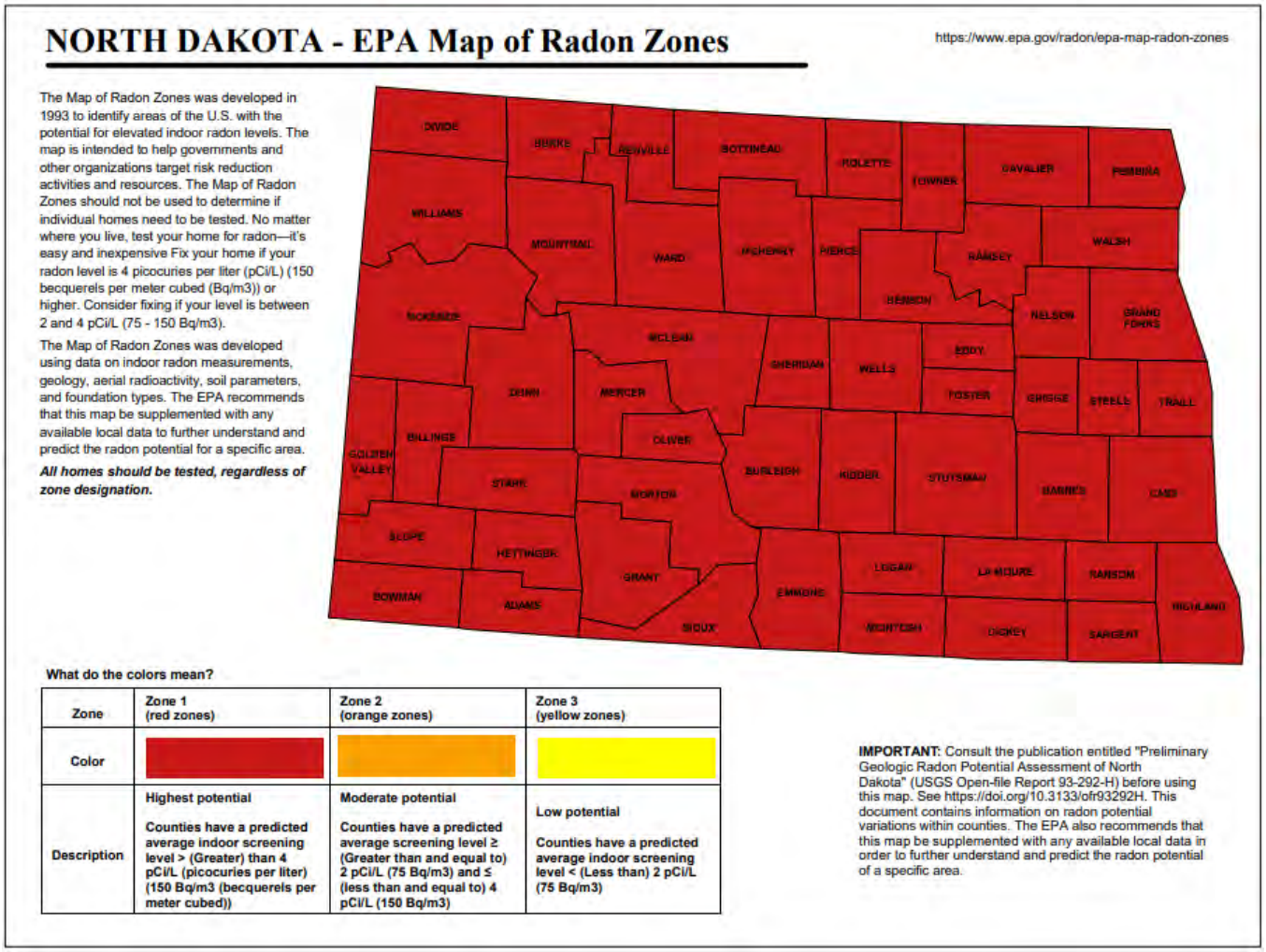
United States Geological Survey definition: "Landslides are the downslope movement of earth materials (rock, debris, and soil) at rates that range from inches per year to tens of miles per hour. Some landslides can move faster than a person can run. Landslides can happen with no notice or can take place over a period of days, weeks, or longer."



Source: USGS ArcGIS

Radon

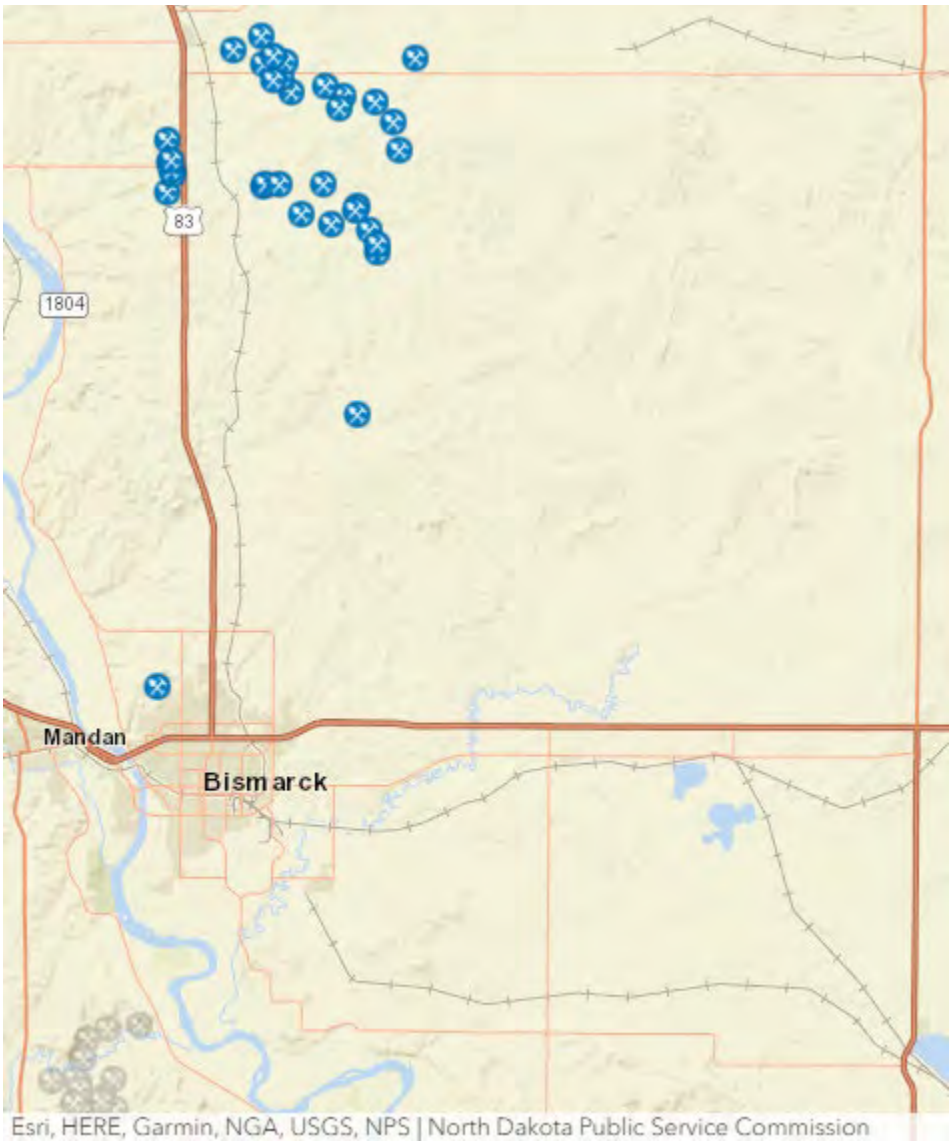
United States Environmental Protection Agency defines radon: "Radon is a radioactive gas that forms naturally when uranium, thorium, or radium, which are radioactive metals break down in rocks, soil and groundwater. People can be exposed to radon primarily from breathing radon in air that comes through cracks and gaps in buildings and homes. Because radon comes naturally from the earth, people are always exposed to it."



Subsidence

Subsidence is the sinking or settling of the ground surface, caused by the compaction of underground materials due to natural processes or human activity like groundwater extraction, mining, and soil consolidation. It causes significant structural damage to infrastructure—including cracked walls, uneven floors, and broken pipelines—often requiring costly, specialized repairs.

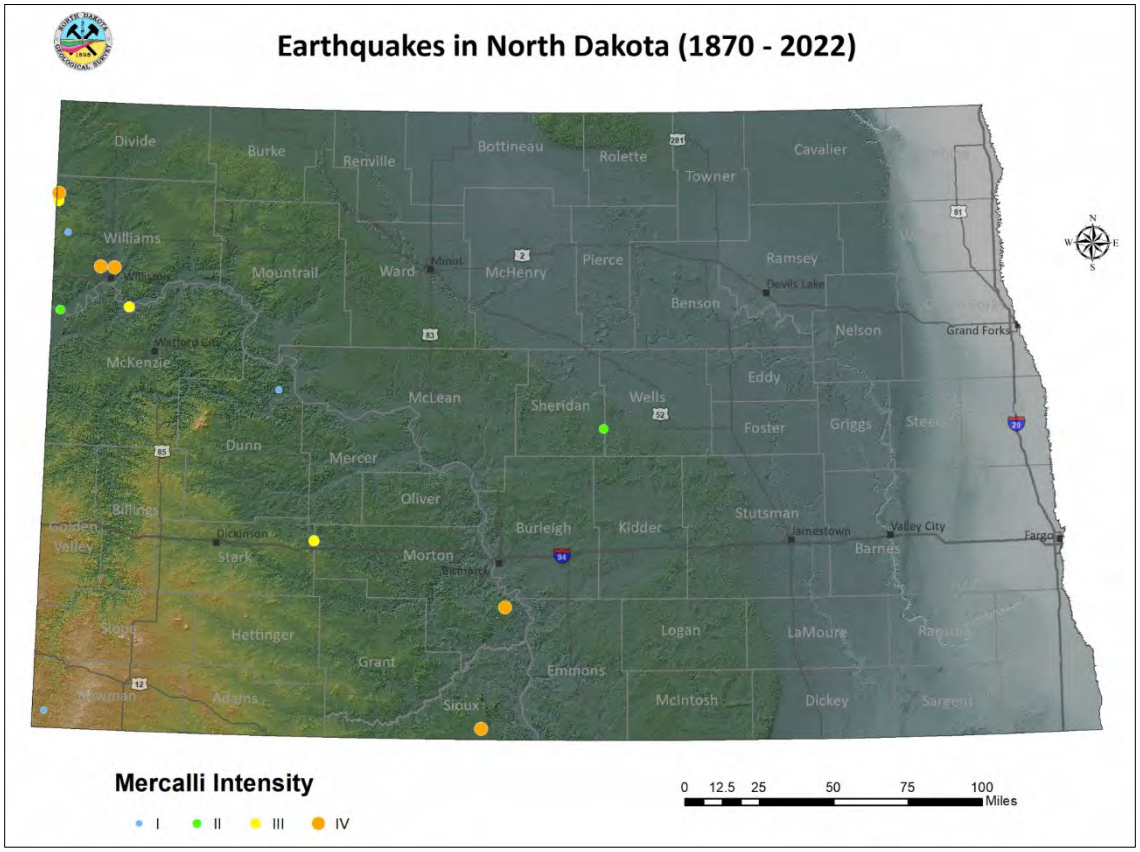
There are 34 abandoned coal mines in Burleigh County which are managed by the North Dakota Public Service Commission's Abandoned Mine Lands Division to eliminate dangers such as subsidence. Abandoned underground lignite mines can cause sinkholes and subsidence, rendering land unusable.



Source: ND Public Service Commission

Earthquake

There is no record of earthquakes in Burleigh County; however, the ND Department of Mineral Resources provides information on an earthquake in Morton County on July 8, 1968 that was felt in various areas of Burleigh County.

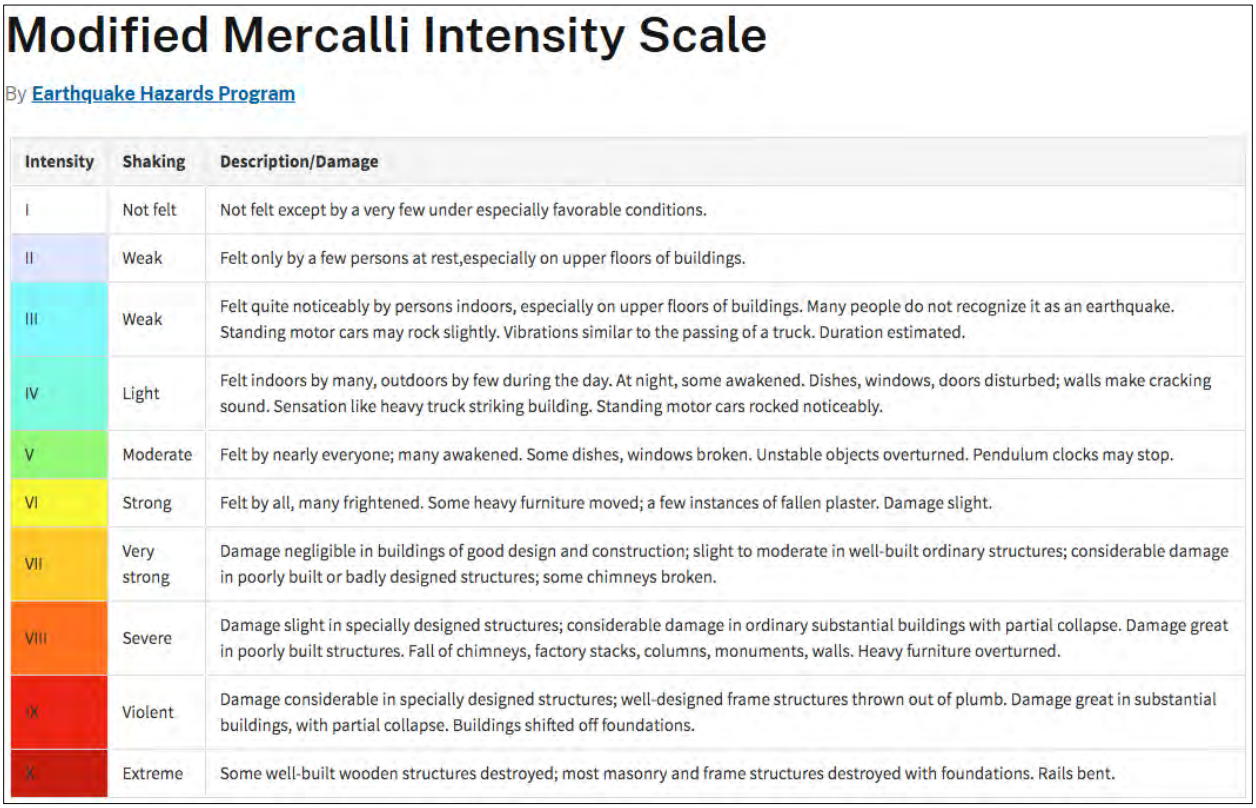


July 8, 1968 M 4.4 Earthquake near Huff, North Dakota

A magnitude M 4.4 earthquake was recorded five miles southwest of Huff in eastern Morton County in south-central North Dakota during the morning of Monday, July 8, 1968 at an estimated depth of 20.5 miles. This earthquake was the first instrumentally verified earthquake recorded in North Dakota and was reported to have been felt over approximately 3,000 square miles of south-central North Dakota. It was reported that "a television set shifted and sounds like thunder were heard." Additionally, Mercalli earthquake intensity IV effects were noted at Bismarck, Fort Rice, Huff, Linton, Mandan, Menoken, and Moffit; and Mercalli intensity I-III effects at Almont, Flasher, Halliday, and St. Anthony (Coffman and Cloud, 1970).

Day	Date	Time (local)	Time (UTC)	Magnitude	Depth (miles)	MMI	T & R	Longitude	Latitude
Monday	07/08/1968	10:50:12	16:50:12	4.4	20.5	IV	136-80	-100.74	46.59

Source: ND Earthquake Catalog (1870 – 2015)



Modified Mercalli Intensity Scale

By Earthquake Hazards Program

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest,especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Source: USGS

Identified Impacts

- Blocked Roads
- Building Collapse
- Business Interruptions
- Delayed Emergency Response
- Downed Power Lines
- Downed Trees
- Evacuation (Localized)
- Loss of Potable Water
- Loss of Power
- Property Damage

History

March 4, 2020: River Road closed between Wilderness Cove Road and Sandy River Drive due to debris and material on the roadway. Opened the next day.

December 22, 2019, to present: River Road closed between Burnt Boat Road and Sandy River Drive due to a landslide. Debris removed and road re-opened on December 30, 2019. The area continues to be monitored for movement.

2018 to present: The University of Mary campus sits upon a bluff and has experienced slumping and continues phases of bank stabilization through a series of mitigation grants.

The southern portion of Apple Creek has experienced some bank failures and slumping. The area above this portion of Apple Creek is home to the University of Mary Campus.

2011 – Double Ditch is an earth lodge village that was home to thousands of Mandan people from 1490-1785. It has been owned by the State of ND since 1936 and began seriously eroding after the 2011 floods which caused the land to slump, crack, and erode at the site north of Bismarck (off of Hwy 1804) and exposed remains of 18 ancient inhabitants. The ND Legislature appropriated $3.5 million to stabilize the site, and pilons (some as deep as 95') were erected within the banks of the Missouri to hold up the village. The ND Historical Society monitors Double Ditch with a drone for biannual inspections.

Source: Forum News Service

July 27, 2001 - Rainfall of 3-4" inches over Bismarck caused flooding of streets and underpasses. Many back roads near the Missouri River were water covered at times and a few washed out. Two mudslides on River Road covered the northbound lanes.

August 12, 1999 – Heavy rainfall ranging from 4-7" saturated much of Burleigh County causing a significant mudslide which closed portions of Highway 1804 in north Bismarck.

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Hazardous Materials Release

Frequency	Highly Likely (Nearly 100% probability in the next year)
Severity	Limited (10-25% of jurisdiction affected)
Risk Class	B
Seasonal Pattern	None
Duration	Hours/Days
Speed of Onset	No warning
Location	Countywide

Description

Hazardous materials are any substances in any quantity or form which may pose an unreasonable risk to the safety, health, environment, and property of citizens. The term "hazardous materials" covers a wide array of products, from relatively innocuous ones such as hair spray in aerosol dispensers and wash preservatives such as creosote to highly toxic or poisonous materials such as anhydrous ammonia and phosgene gas. The potential severity of hazards of these materials is varied, but the primary reason for their designation is their risk to public safety. Tier II forms are available for viewing at the Burleigh County Emergency Management office.

The County is exposed to and is at risk from accidents and/or incidents involving hazardous materials. The economy is based upon agriculture, manufacturing, and industry. All of these rely on the production, use, storage, transportation, etc. of hazardous materials. Explosives, flammable liquids, flammable solids, gases, poisons, pesticides, oxidizing substances, miscellaneous dangerous substances, and radioactive materials are either used in or transported through Burleigh County.

Hazardous materials are transported via three modes into and within Burleigh County:

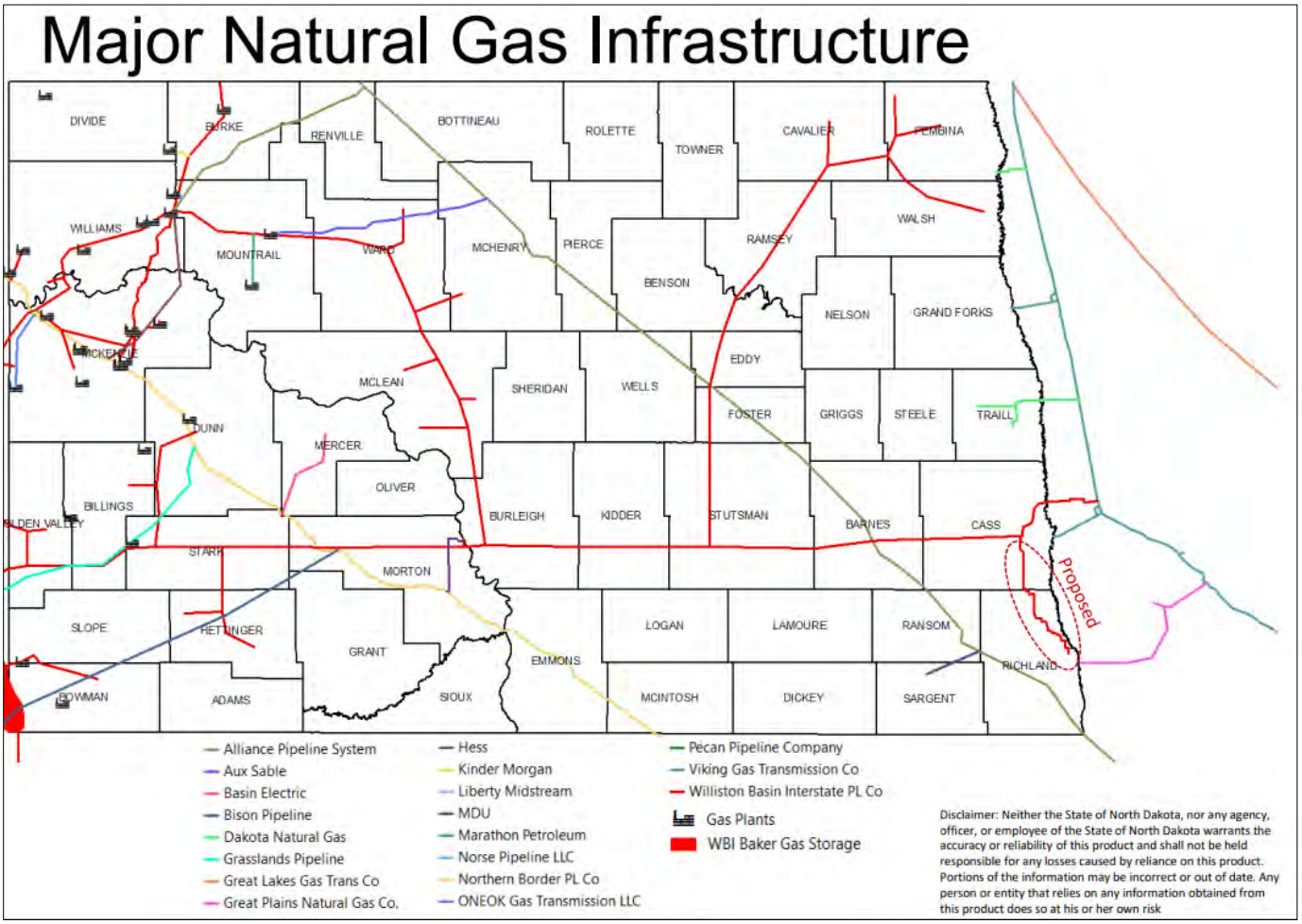
Highways: I-94 and ND 36 run east-west through the county. US-83, ND 1804, ND 41, and ND 14 run north-south through the county. (Attachment 3: Major Roadways in Burleigh County)

Rail: BNSF owns/operates all railways in the county.

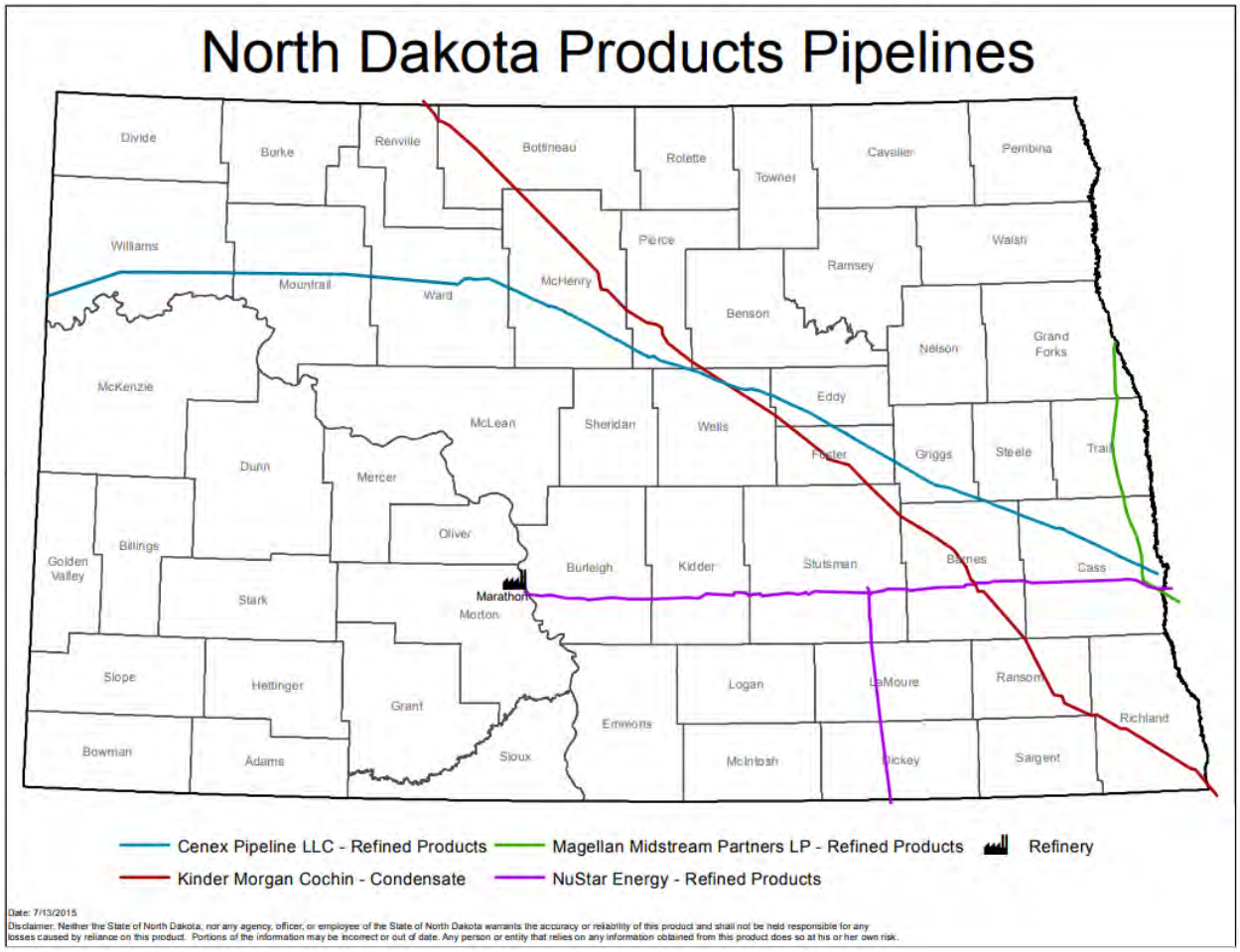
Air: The Bismarck Airport is the only airport in the area with significant air hazardous material transportation activity.

Identified Impacts

- Blocked Roads
- Building Collapse
- Business Interruptions
- Delayed Emergency Response
- Downed Power Lines
- Downed Trees
- Evacuation (Full)
- Evacuation (Localized)
- Explosion
- HAZMAT Release
- Increased Fire Potential
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Potable Water
- Loss of Power
- Mass Casualties
- Property Damage
- School Closure



Source: [ND Pipeline Authority]



Source: [ND Pipeline Authority]

History

The ND Department of Environmental Quality maintains a Spill Investigation Program for environmental incident reports. Burleigh County incident reports 2021 – Present:

Incident ID	Incident Type	Incident Date	Contained	Date Reported	Chemicals	Section	Twp	Range
4835	Environmental Incident	4/11/2025	Yes	4/11/2025	Ethylene glycol - 60 gal	25	139 N	80 W
4813	Environmental Incident	4/3/2025	No	4/3/2025	Ethylene glycol - 1070 gal	32	139 N	80 W
4800	Oil/Gas Spill	3/28/2025	No	3/28/2025	Diesel - 25 gal	25	139 N	80 W
4265	Oil/Gas Spill	10/24/2024	Yes	10/25/2024	Glycol Ethers d - 3 gal	34	140 N	80 W
4263	Environmental Incident	10/15/2024	Yes	10/24/2024	Mineral Oil - 100 gal	23	139 N	80 W
4125	Environmental Incident	9/14/2024	No	9/17/2024	Diesel - 10 gal	26	139 N	80 W
4020	Environmental Incident	7/29/2024	Yes	8/12/2024	R-134a - 5 gal Water - 50 gal Propylene Glycol - 5 gal	9	138 N	80 W
3894	Oil/Gas Spill	7/2/2024	Yes	7/2/2024	unknown - 1 gal	4	138 N	80 W
3697	Environmental Incident	4/22/2024	Yes	4/22/2024	Diluted Magnesium Chloride - 160 gal	30	139 N	80 W
3517	Oil/Gas Spill	2/16/2024	Yes	2/16/2024	Fuel - 600 gal	2	138 N	80 W
3480	Environmental Incident	1/29/2024	Yes	1/31/2024	Mineral Oil - 28 gal	8	138 N	80 W
3081	Environmental Incident	10/10/2023	Yes	10/13/2023	Mineral Oil - 18 gal	21	139 N	80 W
2591	Environmental Incident	4/10/2023	No	5/16/2023	Diesel - 100 gal	9	138 N	80 W
2587	Environmental Incident	4/27/2023	No	5/15/2023	Produced Water - 200 gal	4	139 N	80 W
2576	Oil/Gas Spill	5/5/2023	Yes	5/8/2023	Diesel - 10 gal	29	138 N	80 W
2512	Environmental Incident	4/18/2023	No	4/19/2023	Phos-Chek WD8811 - 25 gal	27	139 N	80 W
2448	Oil/Gas Spill	3/29/2023	Yes	3/30/2023	Type 2 mineral oil - 25 gal	4	139 N	80 W
2345	Environmental Incident	2/28/2023	Yes	2/28/2023	lube oil - 50 gal	32	139 N	76 W
1989	Oil/Gas Spill	11/16/2022	Yes	11/16/2022	Fuel - 50 gal	21	139 N	80 W
1935	Environmental Incident	11/1/2022	Yes	11/1/2022	Diesel - 1 gal	29	139 N	76 W
1848	Oil/Gas Spill	9/28/2022	No	9/28/2022	Diesel - 10 mcf	34	143 N	80 W
1669	Environmental Incident	7/24/2022	Yes	7/25/2022		15	139 N	80 W
1597	Oil/Gas Spill	7/1/2022	Yes	7/1/2022	Mineral oil - 2 gal	25	139 N	80 W
1215	Environmental Incident	3/4/2022	No	3/4/2022	Diesel - 200 gal	35	139 N	79 W
910	Environmental Incident	11/27/2021	Yes	11/29/2021	Mineral Oil - 20 gal	4	138 N	80 W
626	Environmental Incident	8/8/2021	No	8/9/2021	Coal - 4200000 lbs	12	138 N	80 W
537	Oil/Gas Spill	10/28/2016	No	7/7/2021	Benzene - 5 gal	2	138 N	80 W
337	Oil/Gas Spill	4/21/2021	Yes	4/22/2021	Benzene - 1 gal	4	138 N	80 W
336	Oil/Gas Spill	4/21/2021	Yes	4/22/2021	Benzene - 1 gal	4	138 N	80 W
328	Oil/Gas Spill	4/20/2021	Yes	4/21/2021	Benzene - 1 gal	3	138 N	80 W
323	Oil/Gas Spill	4/19/2021	Yes	4/20/2021	Benzene - 1 gal	21	139 N	80 W

321	Oil/Gas Spill	4/17/2021	Yes	4/19/2021	Benzene - 1 gal	25	139 N	80 W
320	Oil/Gas Spill	4/16/2021	Yes	4/19/2021	Benzene - 1 gal	24	139 N	80 W
227	Environmental Incident	3/14/2021	Yes	3/16/2021	Milk - 7900 gal	3	141 N	76 W
77	Environmental Incident	2/4/2021	Yes	2/4/2021	Other - 25 gal	12	138 N	80 W

Source: ND Department of Environmental Quality

Infectious Disease and Pest Infestation

(Including human, animal, and plant diseases)

Frequency	Likely (10-100% probability in the next year, or at least 1 chance in next 10 years)
Severity	Critical (25-50% of jurisdiction affected)
Risk Class	B
Seasonal Pattern	None
Duration	Hours/Days
Speed of Onset	No warning
Location	Countywide

Description

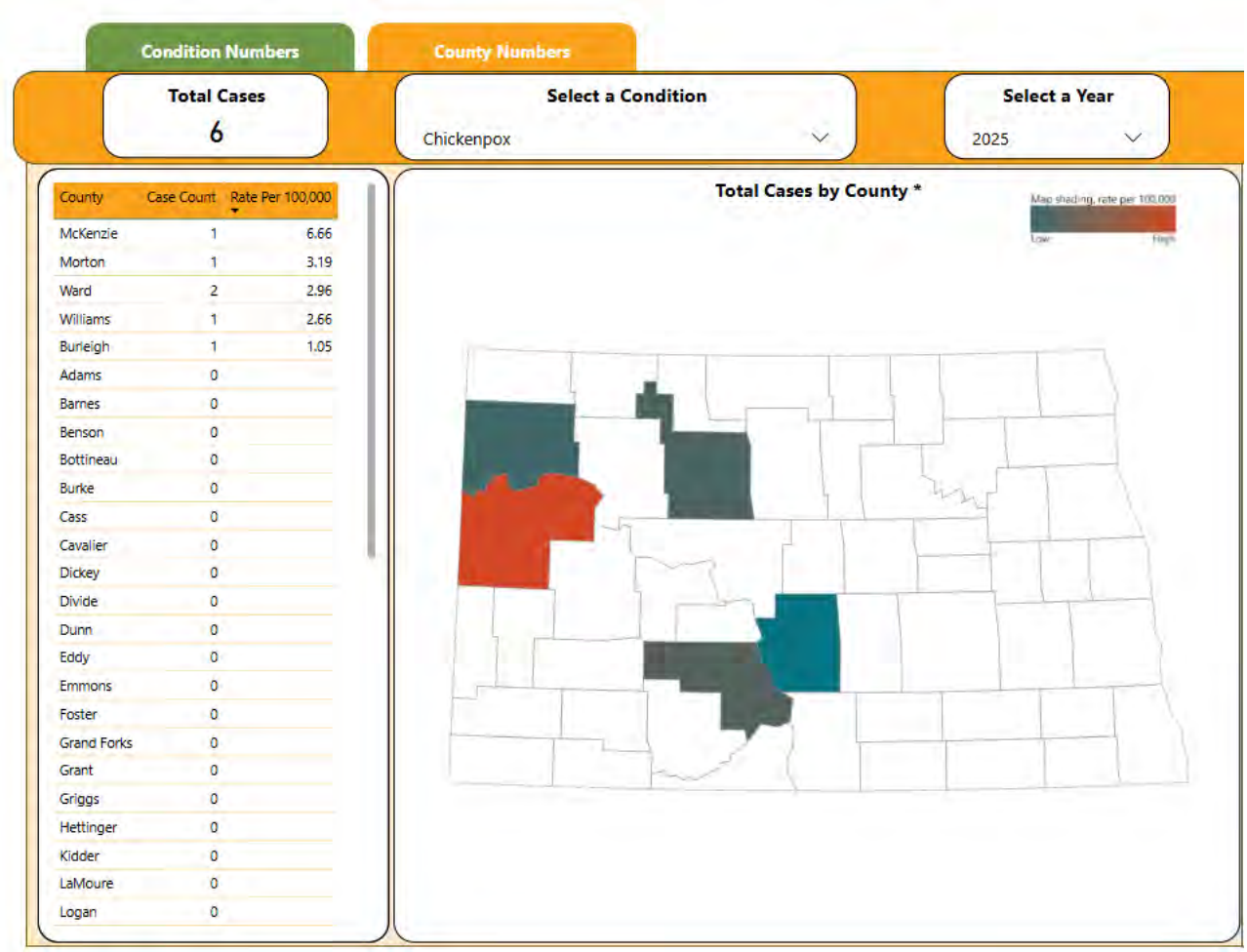
Naturally occurring biological diseases in humans as well as those biological agents found in the environment, or diagnosed in animals, that have the potential for transmission to humans.

The probability of communicable disease in Burleigh County presents challenges due to a limited history of outbreaks. Medical advances over the past 50 years prevent many disease outbreaks, yet the potential remains. Burleigh County is primarily a rural setting and somewhat isolated from the rapid spread of global diseases, however, international and domestic travel is so common that, like the Spanish Influenza Pandemic of 1918, North Dakotans would most likely be affected at some point. Urban areas could see rapid spread of such diseases through their populations.

Identified Impacts

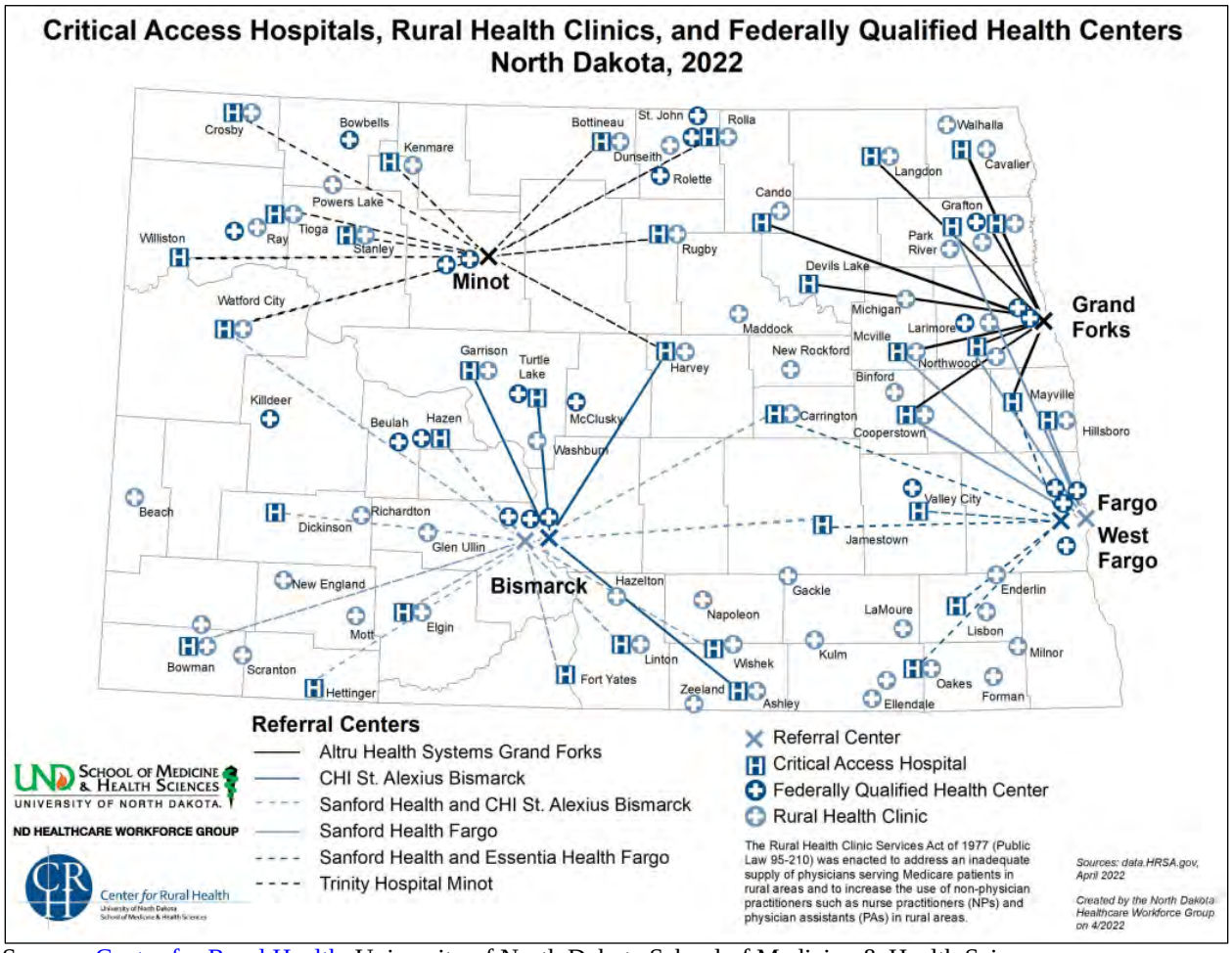
- Business Interruptions
- Delayed Emergency Response
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Potable Water
- Mass Casualties
- School Closure

The ND Department of Health and Human Services maintains a listing of "Diseases, Conditions and Immunization" as well as "Disease Report Dashboard".



County	Case Count	Rate Per 100,000
McKenzie	1	6.66
Morton	1	3.19
Ward	2	2.96
Williams	1	2.66
Burleigh	1	1.05
Adams	0	
Barnes	0	
Benson	0	
Bottineau	0	
Burke	0	
Cass	0	
Cavalier	0	
Dickey	0	
Divide	0	
Dunn	0	
Eddy	0	
Emmons	0	
Foster	0	
Grand Forks	0	
Grant	0	
Griggs	0	
Hettinger	0	
Kidder	0	
LaMoure	0	
Logan	0	

ND is primarily rural with access to networked medical care:



Source: Center for Rural Health, University of North Dakota School of Medicine & Health Sciences.

Most Significant Health Needs

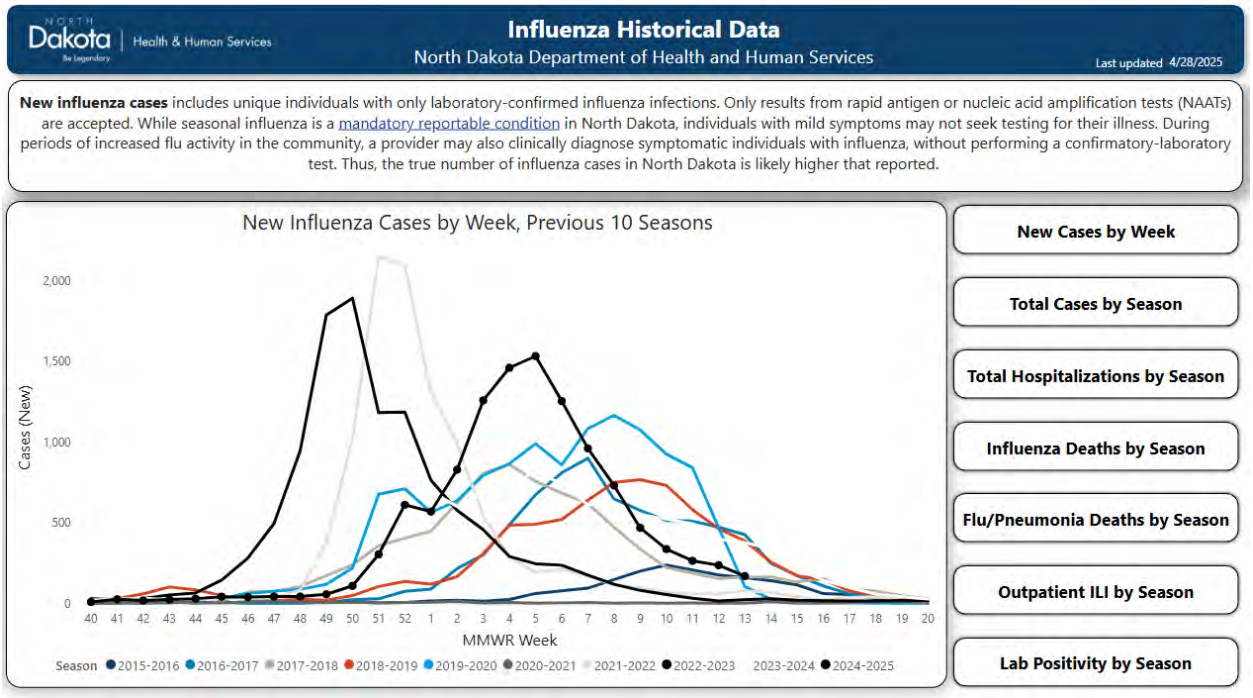
Bismarck
CHI St. Alexius Medical Center - 2022
Mental health
Healthy living (chronic health issues/access to healthy food)
Access to affordable healthcare
Affordable housing
Access to healthcare providers
Public transportation
Long-term care

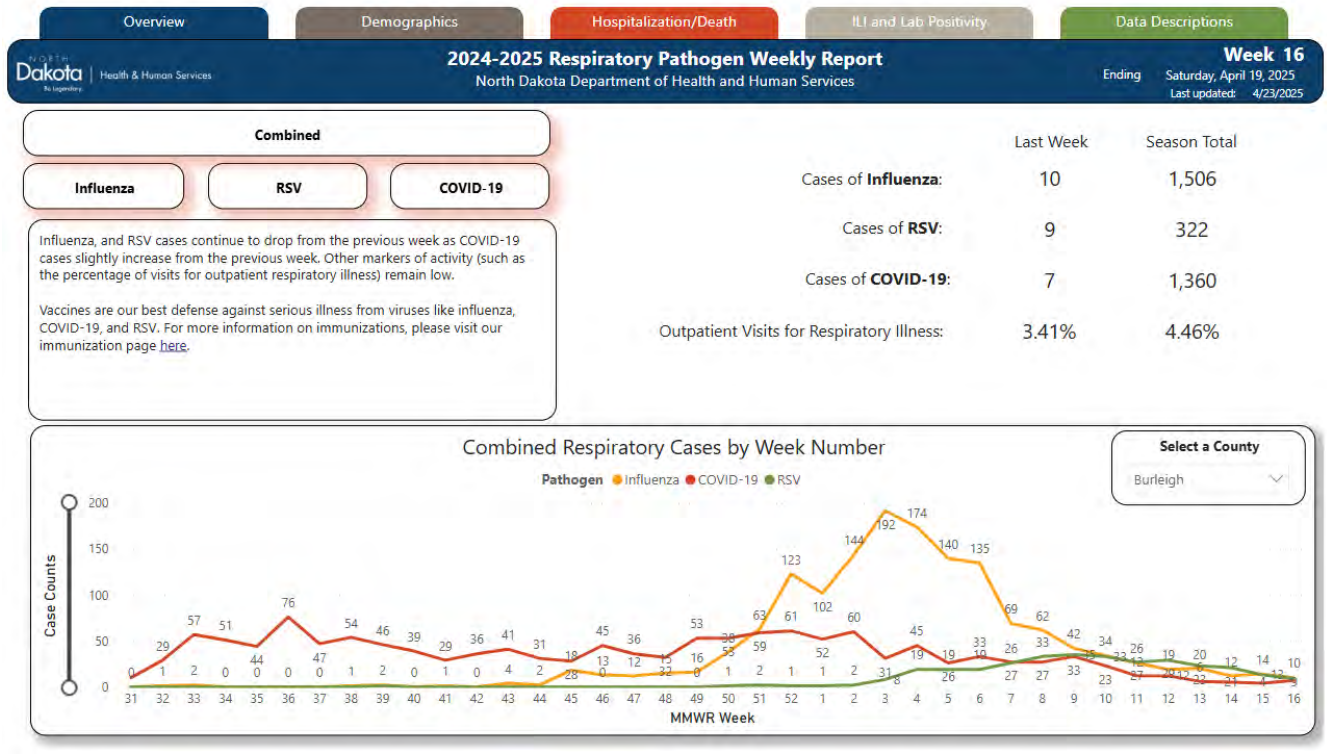
Burleigh County (Rural)
Burleigh County Board of Health - 2014
Elevated rate of excessive drinking
Cost/adequacy of health insurance
Concerns about availability of emergency services
Cost of healthcare services
Availability of resources to help elderly stay in their homes

Source: https://ruralhealth.und.edu/projects/community-health-needs-assessment/community-needs

History

Burleigh County has experienced one pandemic (COVID-19 in 2020) in recent years, and seasonal influenza outbreaks occur annually—both are tracked by the ND Department of Health and Human Services.

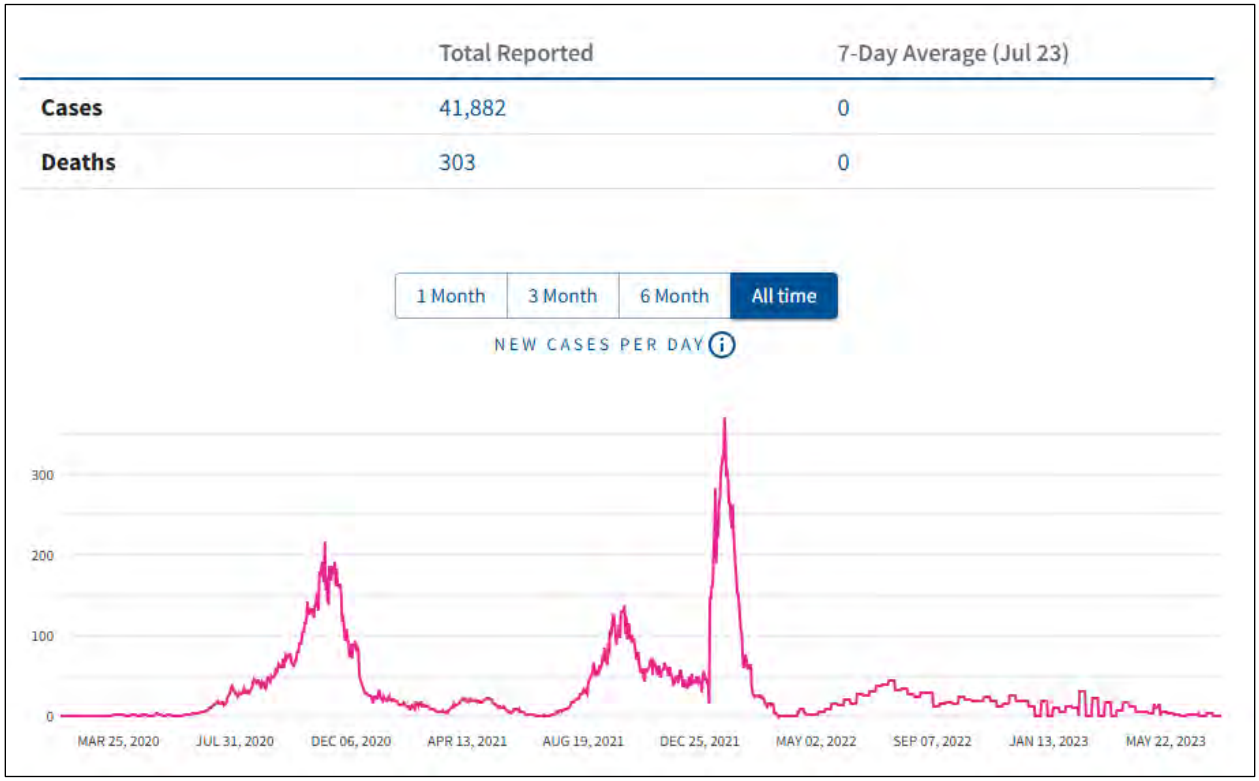




Source: [ND Department of Health and Human Services]

North Dakota has had three influenza pandemics in the 20th century: 1918 caused 5,100 deaths in North Dakota, 500,000 deaths in the United States; 1957 resulted in 70,000 deaths in the United States; and 1968 resulted in 34,000 deaths in the United States.

Burleigh County COVID-19 data:



Source: USA Facts

Spanish Influenza Pandemic of 1918

The magnitude of a communicable disease outbreak varies from everyday disease occurrences to widespread infection. During the 1918 Influenza Pandemic, infection rates approached 28% in the United States. (Billings, 1997). Other pandemics produced infections rates as high as 35% of the total population. (World Health Organization, 2007). Such a pandemic affecting North Dakota represents a severe magnitude event. Almost any highly contagious, incapacitating disease that enters the North Dakota population would quickly overwhelm local and state health resources. Similarly, any rapidly spreading bioterrorism event for which little vaccination or containment capability exists is a high magnitude event.

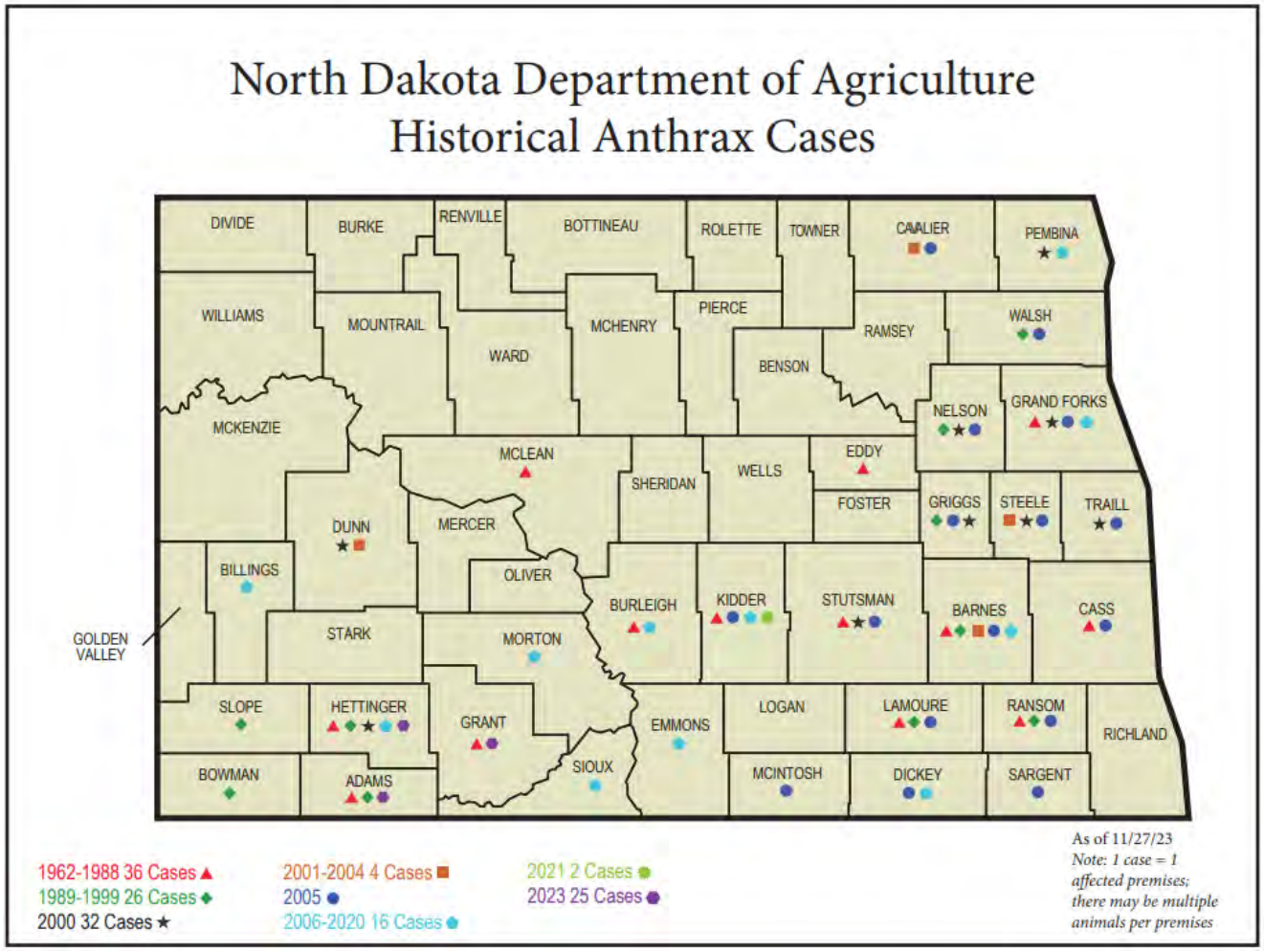
Agricultural Diseases, Noxious Weeds, and Pests

A comprehensive disease list (reportable disease, related pests diseases or noxious weeds, disease) maintained by the ND Department of Agriculture.

Anthrax

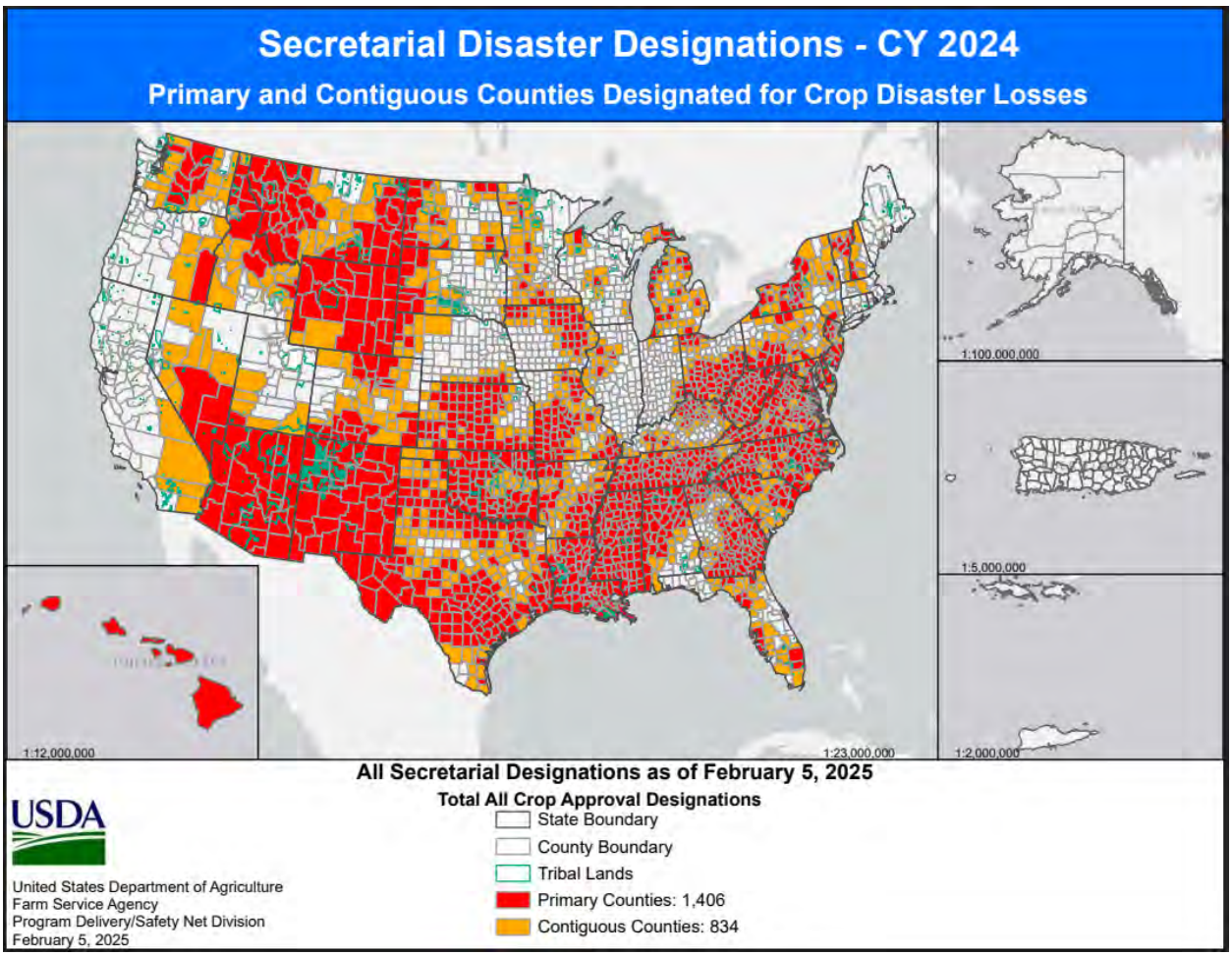
"Anthrax occurs worldwide and is associated with sudden death of cattle and sheep. Anthrax can infect all warm-blooded animals, including humans. The bacteria that causes anthrax (Bacillus anthracis) can form spores which are resistant to heat, cold, chemical disinfectants and drying. The anthrax spore may live indefinitely in the soil of a contaminated pasture or yard. Anthrax is more commonly seen in areas after periods of extended dryness or excessive rain. People may develop cutaneous anthrax after exposure to infected animals and animal products including hides, hair, and wool and may develop a more serious form of anthrax after eating contaminated undercooked meat or by inhaling the spores during a necropsy or disposal of opened carcasses. A vaccine is available for cattle and recommended for use annually in areas of historically high infection rates or when environmental factors increase the risk of anthrax in a new area." (Source: ND Department of Agriculture)

Burleigh County has a low case history:



Source: ND Department of Agriculture

Agriculture-related disasters and disaster designations are quite common. Disaster designation information and fact sheets are provided by the United Stated Department of Agriculture.



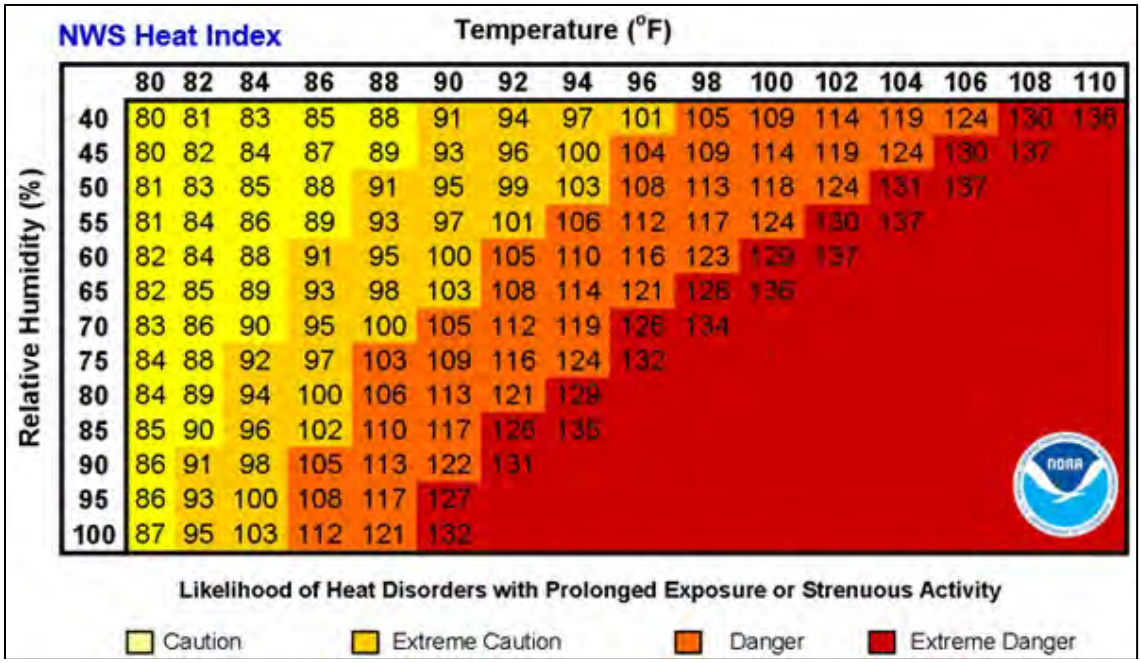
Source: United States Department of Agriculture Farm Service Agency

Severe Summer Weather
(Including downbursts, extreme heat, hail, lightning, high wind, and tornado)

Frequency	Highly Likely (Nearly 100% probability in the next year)
Severity	Limited (10-25% of jurisdiction affected)
Risk Class	B
Seasonal Pattern	April to November
Duration	2 to 5 hours
Speed of Onset	Little to no warning
Location	Countywide

Description
Severe summer storms are generated by temperature imbalances in the atmosphere, and as warm, moist are rises, the thunderstorm develops. These conditions will produce updrafts and downdrafts which are the reason for gust fronts, heavy rain (flash flooding), lightning, hail, and high winds. Downburst or straight-line winds can be as deadly as tornadoes. If the thunderstorm continues to intensify, a tornado may develop.

Extreme Heat: Period of abnormally hot and dangerous temperatures—often with high humidity—that can cause significant negative impacts on people, animals, and infrastructure. Generally characterized by heat index values reaching 105°F to 110°F or higher, typically lasting for at least two days, often with nighttime temperatures not dropping below 75 F.



Source: National Weather Service

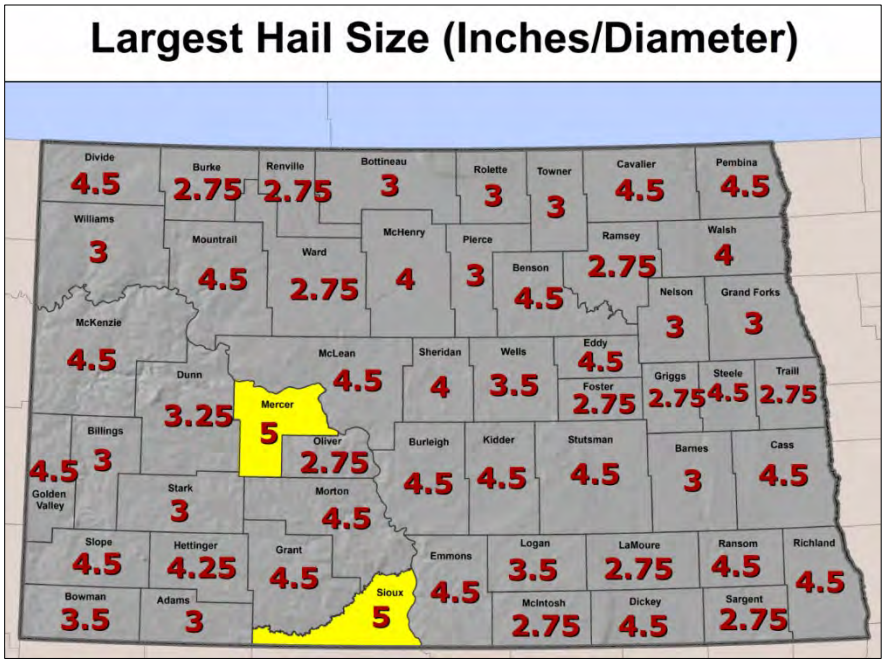
Lightning:

- Causes an average of 55-60 fatalities and 400 injuries each year
- Occurs with all thunderstorms
- Costs more than $1 billion in insured losses each year

High Winds:

- Pressure gradient, non-thunderstorm winds which occur both in summer-season (May-Oct) and winter-season (Nov-Apr).
- High Winds are sustained winds at GTE 40 mph or occasional winds gusts GTE 58 mph, without thunderstorms present.

Hail: Hail is larger than sleet and forms only in thunderstorms. Hail stones can range from pea size to the size of a grapefruit. Hail has the potential to be life-threatening due to falling from great heights; large hailstones can fall at speeds faster than 100 mph! The major hazard is to crops, aircraft, automobiles, roofs, and windows, etc. The destructiveness of hailstorms is not due to the hailstones alone. Hail damage is difficult to determine, as hail, wind, and rain frequently occur at the same time.



Source: National Weather Service Weather Forecast Office, Bismarck, ND

Hail Size Description Chart

Hailstone size	Measurement	
	in.	cm.
bb	< 1/4	< 0.64
pea	1/4	0.64
dime	7/10	1.8
penny	3/4	1.9
nickel	7/8	2.2
quarter	1	2.5
half dollar	1 1/4	3.2
golf ball	1 3/4	4.4
billiard ball	2 1/8	5.4
tennis ball	2 1/2	6.4
baseball	2 3/4	7.0
softball	3.8	9.7
Compact disc / DVD	4 3/4	12.1

Note: Hail size refers to the diameter of the hailstone.

Source: National Weather Service

Thunderstorm Winds:

Thunderstorm Winds are all considered downburst wind gusts (3-second gusts GTE 58 mph), and are distinguished by the size of the outflow, as microburst (smaller than 2.5 mi diameter) or macroburst (larger than 2.5 mi diameter). Much larger footprint downburst winds can result from thunderstorm Squall-lines, up to and including Derecho-scale winds. Such large scale thunderstorm winds are often referred to as straight-line winds, to distinguish them from the smaller-scale tornadoes cyclonic winds.

Straight-line Winds:

- Any thunderstorm wind that is not associated with rotation, and is used mainly to differentiate from tornadic winds
- Can exceed 125 mph
- Can cause destruction equal to a tornado
- Are extremely dangerous to aviation

Downburst:

- A strong, localized downdraft from a thunderstorm that produces damaging "straight-line" winds upon hitting the ground.
- Winds can exceed 150 mph, causing damage similar to tornadoes.
- Classified as microbursts (smaller than 2.5 miles) or macrobursts (larger than 2.5 miles).

Beaufort Wind Chart – Estimating Winds 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.**

Source: National Weather Service

Thunderstorm Damage Threat (tag category)	Wind	Hail diameter
Base (no tag; default)	58 mph (60 mph will appear in the warning)	1.00 inch (U.S. quarter)
Considerable	70 mph	1.75 inch (golfball)
Destructive	80 mph	2.75 inch (baseball)

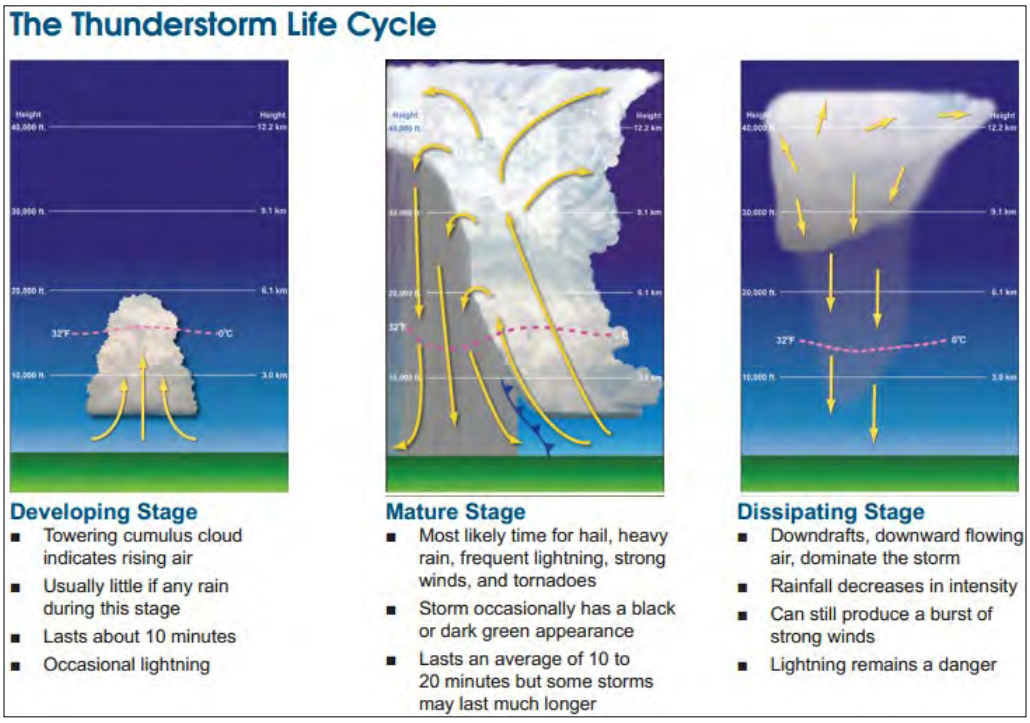
Source: National Weather Service

Thunderstorm Probability and Related Lightning Activity Level (LAL)

Thunderstorm Probability	Thunderstorm Category	Rain Intensity	LAL	Lightning Characteristics (CG: Cloud-to-Ground)
None	None	Variable	1	None
10%	Isolated	Light Rain occasionally reaching the ground	2	1 to 5 CG lightning strikes in 5-minute period
20%	Widely Scattered	Light to moderate rain reaching the ground	3	6 to 10 CG lightning strikes in a 5-minute period
30-50%	Scattered	Moderate rain is common	4	Frequent, 11 to 15 CG strikes in 5-minute period
60-70%	Numerous	Moderate to heavy rainfall	5	Frequent and intense, 15+ CG strikes in 5-minute period
20% (Dry)	Dry Lightning	Little to no rain	6	Like LAL 3 but without rain, w/higher wildland fire threat

Source: Compiled from National Weather Service Glossary, 2023

Straight-line winds are any winds not associated with the rotation of a tornado and are responsible for most thunderstorm damage. The winds can exceed 125 mph! A downburst is a small area of rapidly descending air beneath a thunderstorm and can cause damage equivalent to a strong tornado and can be extremely hazardous to aviation. The number one cause of wind damage in North Dakota is from downburst winds, not tornadoes.



Source: Thunderstorms, Tornadoes, Lightning, A Preparedness Guide, US Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service

Tornadoes:

- A rotating column of air, in contact with the ground and pendant (attached) to the base of a thunderstorm.
- Cause an average of 60-65 fatalities and 1,500 injuries each year
- Can produce wind speeds in excess of 200 mph
- Can be 1 mile wide and stay on the ground over 50 miles

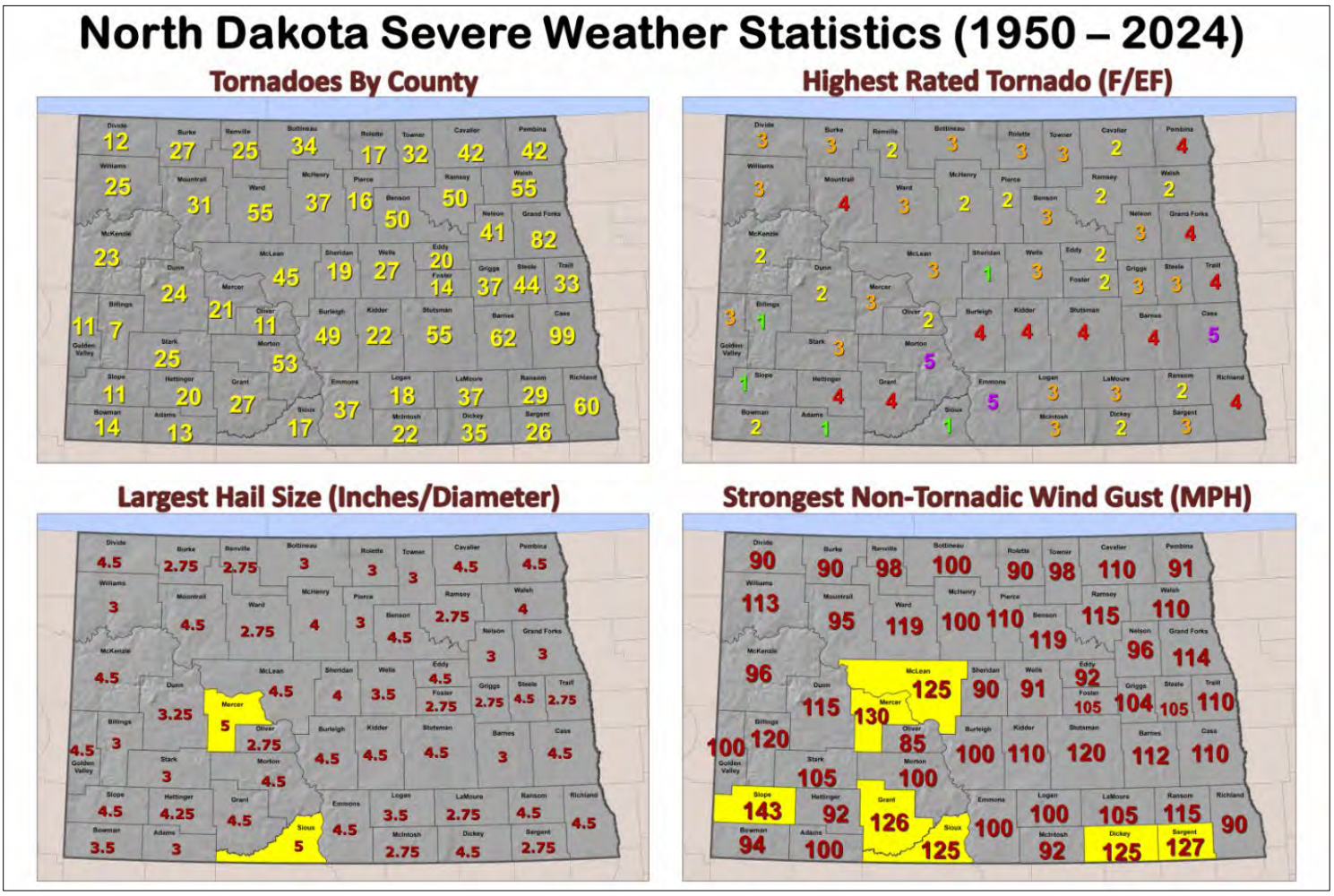
A thunderstorm affects a relatively small area when compared to a winter storm. The typical thunderstorm is 15 miles in diameter and lasts an average of 30 minutes. Despite their small size, all thunderstorms are dangerous! Every thunderstorm needs:

- Moisture—to form clouds and rain
- Unstable air—warm air that can rise rapidly
- Lift—caused by cold or warm fronts, sea breezes, mountains, or the sun's heat.

The Enhanced Fujita Scale (EF Scale)

EF SCALE	
EF Rating	**3 Second Gust (mph)**
0	65-85
1	86-110
2	111-135
3	136-165
4	166-200
5	Over 200

Source: National Weather Service



Source: National Weather Service Weather Forecast Office, Bismarck, ND

Identified Impacts

- Blocked Roads
- Building Collapse
- Business Interruptions
- Delayed Emergency Response
- Downed Power Lines
- Downed Trees
- Evacuation (Localized)
- Explosion
- Flooding (Street)
- Flooding (Structure)
- HAZMAT Release
- Increased Fire Potential
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Potable Water
- Loss of Power
- Mass Casualties
- Property Damage
- School Closure
- Sewer Backup

History

Extreme Heat

Location	Date	Time	T.Z.	Type	Dth	Inj	PrD	CrD
BURLEIGH	08/03/2001	11:00	CST	Heat	0	0	0.00K	0.00K
BURLEIGH	08/04/2001	11:00	CST	Heat	0	0	0.00K	0.00K
BURLEIGH	08/07/2001	11:00	CST	Heat	0	0	0.00K	0.00K
BURLEIGH	07/16/2011	11:00	CST-6	Excessive Heat	0	0	0.00K	0.00K
Totals:					0	0	0.00K	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 12/2024)

Lightning

Location	Date	Time	T.Z.	Type	Dth	Inj	PrD	CrD
STERLING	08/28/2024	17:30	CST-6	Lightning	0	3	1.00K	0.00K
BISMARCK	07/30/2011	02:00	CST-6	Lightning	0	0	190.00K	0.00K
WING	07/27/2010	02:25	CST-6	Lightning	0	0	8.00K	0.00K
BALDWIN	06/26/2010	07:28	CST-6	Lightning	0	0	1.00K	0.00K
MENOKEN	07/16/2008	04:00	CST-6	Lightning	0	0	5.00K	0.00K
BISMARCK	08/02/1996	21:00	CST	Lightning	0	0	2.00K	0.00K
Totals:					0	3	207.00K	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 12/2024)

High Wind (ten-year history, May-Oct, plus previous events including death, injury, or damage**)**

Location	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
BURLEIGH	10/05/2024	06:00	CST-6	High Wind	53 kts. MG	0	0	0.00K	0.00K
BURLEIGH	10/13/2022	10:00	CST-6	High Wind	54 kts. MG	0	0	0.00K	0.00K
BURLEIGH	06/15/2022	12:00	CST-6	High Wind	56 kts. MG	0	0	0.00K	0.00K
BURLEIGH	05/13/2022	05:00	CST-6	High Wind	54 kts. MG	0	0	0.00K	0.00K
BURLEIGH	10/31/2020	11:00	CST-6	High Wind	57 kts. MG	0	0	0.00K	0.00K
BURLEIGH	10/12/2020	18:00	CST-6	High Wind	50 kts. MG	0	0	0.00K	0.00K
BURLEIGH	09/02/2020	18:00	CST-6	High Wind	51 kts. MG	0	0	0.00K	0.00K
BURLEIGH	10/11/2015	12:00	CST-6	High Wind	65 kts. MG	0	0	0.00K	0.00K
BURLEIGH	08/22/2015	15:00	CST-6	High Wind	51 kts. MG	0	0	0.00K	0.00K
BURLEIGH	07/28/2015	14:00	CST-6	High Wind	56 kts. MG	0	0	0.00K	0.00K
BURLEIGH	05/25/2010	09:00	CST-6	High Wind	52 kts. EG	0	0	30.00K	0.00K
BURLEIGH	05/01/2008	18:00	CST-6	High Wind	52 kts. EG	0	0	15.00K	0.00K
BURLEIGH	04/05/2000	08:30	CST	High Wind	62 kts. M	0	10	0.00K	0.00K
Totals:						0	11	190.00K	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 12/2024)

Thunderstorm Winds (Damaging Downburst)
(ten-year history plus previous events including death, injury, or damage**)**

Location	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
STERLING	09/10/2024	01:00	Thunderstorm Wind	65 kts. EG	0	0	10.00K	0.00K
STERLING	08/28/2024	18:04	Thunderstorm Wind	87 kts. EG	0	0	300.00K	500.00K
BISMARCK AIRPORTt	08/28/2024	17:31	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
BISMARCK	08/28/2024	17:25	Thunderstorm Wind	61 kts. EG	0	0	20.00K	0.00K
WING	08/06/2024	21:57	Thunderstorm Wind	63 kts. MG	0	0	0.00K	0.00K
BISMARCK	06/16/2024	01:09	Thunderstorm Wind	61 kts. EG	0	0	1.00K	0.00K
BISMARCK AIRPORT	09/04/2023	20:15	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
BISMARCK	09/04/2023	20:15	Thunderstorm Wind	70 kts. EG	0	0	60.00K	0.00K
BISMARCK AIRPORT	09/04/2023	19:28	Thunderstorm Wind	53 kts. MG	0	0	0.00K	0.00K
WILTON	08/01/2023	20:05	Thunderstorm Wind	70 kts. EG	0	0	0.00K	50.00K
MOFFIT	07/26/2023	16:50	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BALDWIN	06/22/2023	03:00	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
BISMARCK AIRPORT	08/23/2022	18:40	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BALDWIN	08/23/2022	17:25	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
BISMARCK	07/10/2022	04:05	Thunderstorm Wind	58 kts. MG	0	0	0.00K	0.00K
BISMARCK	06/20/2022	00:30	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
BISMARCK AIRPORT	06/20/2022	00:10	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K
BISMARCK AIRPORT	05/07/2022	16:52	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
STERLING	07/16/2021	11:30	Thunderstorm Wind	65 kts. EG	0	0	100.00K	0.00K
STERLING	07/16/2021	11:23	Thunderstorm Wind	55 kts. MG	0	0	0.00K	0.00K
MOFFIT	06/11/2021	01:02	Thunderstorm Wind	69 kts. MG	0	0	0.00K	0.00K
MOFFIT	06/08/2021	11:47	Thunderstorm Wind	55 kts. MG	0	0	0.00K	0.00K
MOFFIT	07/07/2020	23:16	Thunderstorm Wind	58 kts. MG	0	0	0.00K	0.00K
STERLING	07/07/2020	23:11	Thunderstorm Wind	53 kts. MG	0	0	0.00K	0.00K
BISMARCK	07/07/2020	22:46	Thunderstorm Wind	62 kts. MG	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/07/2020	22:40	Thunderstorm Wind	55 kts. MG	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/02/2020	20:52	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
FT LINCOLN	06/30/2020	08:03	Thunderstorm Wind	76 kts. MG	0	0	30.00K	0.00K
DRISCOLL	06/17/2020	00:32	Thunderstorm Wind	70 kts. EG	0	0	150.00K	0.00K
STERLING	06/17/2020	00:31	Thunderstorm Wind	63 kts. MG	0	0	0.00K	0.00K
MOFFIT	09/20/2019	16:12	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K
BISMARCK AIRPORT	08/06/2019	15:41	Thunderstorm Wind	62 kts. MG	0	0	0.00K	0.00K
STERLING	08/06/2019	15:39	Thunderstorm Wind	59 kts. MG	0	0	0.00K	0.00K
FT LINCOLN	08/06/2019	15:05	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

REGAN	07/13/2019	00:20	Thunderstorm Wind	78 kts. EG	0	0	250.00K	100.00K
MOFFIT	06/07/2019	23:47	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
STERLING	07/08/2018	01:18	Thunderstorm Wind	61 kts. MG	0	0	0.00K	0.00K
MOFFIT	07/08/2018	01:00	Thunderstorm Wind	78 kts. EG	0	0	150.00K	0.00K
WILTON	07/03/2018	23:00	Thunderstorm Wind	58 kts. MG	0	0	0.00K	0.00K
MOFFIT	07/03/2018	04:47	Thunderstorm Wind	79 kts. MG	0	0	0.00K	0.00K
BISMARCK	07/03/2018	04:18	Thunderstorm Wind	56 kts. EG	0	0	1.00K	0.00K
BISMARCK AIRPORT	07/03/2018	04:14	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K
STERLING	06/29/2018	01:03	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
MOFFIT	06/29/2018	00:47	Thunderstorm Wind	63 kts. MG	0	0	0.00K	0.00K
BISMARCK AIRPORT	06/29/2018	00:35	Thunderstorm Wind	55 kts. MG	0	0	0.00K	0.00K
BISMARCK	06/29/2018	00:30	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
BISMARCK	06/29/2018	00:27	Thunderstorm Wind	65 kts. EG	0	0	0.00K	0.00K
BISMARCK	06/29/2018	00:15	Thunderstorm Wind	63 kts. MG	0	0	0.00K	0.00K
BALDWIN	06/29/2018	00:09	Thunderstorm Wind	65 kts. EG	0	0	15.00K	0.00K
MOFFIT	07/21/2017	22:47	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
STERLING	07/04/2017	17:41	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
BISMARCK ARPT	06/27/2017	20:04	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
STERLING	09/07/2016	13:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
WING	09/04/2016	07:40	Thunderstorm Wind	65 kts. EG	0	0	75.00K	10.00K
WILTON	09/04/2016	07:15	Thunderstorm Wind	70 kts. EG	0	0	100.00K	30.00K
WING	07/16/2016	12:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MOFFIT	06/22/2016	00:20	Thunderstorm Wind	73 kts. MG	0	0	0.00K	0.00K
BISMARCK	06/21/2016	23:50	Thunderstorm Wind	75 kts. EG	0	0	20.00K	0.00K
BISMARCK	06/21/2016	23:40	Thunderstorm Wind	65 kts. MG	0	0	250.00K	0.00K
BISMARCK AIRPORT	06/17/2016	03:23	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
BISMARCK AIRPORT	06/19/2015	20:03	Thunderstorm Wind	71 kts. MG	0	0	1.000M	0.00K
BISMARCK AIRPORT	06/19/2015	20:01	Thunderstorm Wind	78 kts. EG	0	0	350.00K	0.00K
MOFFIT	07/05/2014	19:50	Thunderstorm Wind	61 kts. EG	0	0	10.00K	0.00K
BISMARCK AIRPORT	07/05/2014	19:30	Thunderstorm Wind	65 kts. EG	0	0	175.00K	0.00K
REGAN	06/22/2013	21:50	Thunderstorm Wind	61 kts. EG	0	0	35.00K	0.00K
BISMARCK	06/22/2013	21:21	Thunderstorm Wind	61 kts. EG	0	0	30.00K	0.00K
BISMARCK	06/22/2013	21:05	Thunderstorm Wind	56 kts. EG	0	0	20.00K	0.00K
BISMARCK	06/22/2013	21:00	Thunderstorm Wind	65 kts. EG	0	0	40.00K	0.00K
STERLING	07/31/2011	22:35	Thunderstorm Wind	70 kts. EG	0	0	40.00K	0.00K
BISMARCK	07/31/2011	22:10	Thunderstorm Wind	74 kts. EG	0	0	35.00K	0.00K

BISMARCK AIRPORT	07/31/2011	21:56	Thunderstorm Wind	59 kts. MG	0	0	0.20K	0.00K
BISMARCK	07/31/2011	21:45	Thunderstorm Wind	61 kts. EG	0	0	35.00K	0.00K
BISMARCK	07/22/2011	22:01	Thunderstorm Wind	56 kts. EG	0	0	15.00K	0.00K
MOFFIT	07/10/2011	13:14	Thunderstorm Wind	83 kts. EG	0	0	250.00K	0.00K
MOFFIT	06/22/2010	02:00	Thunderstorm Wind	71 kts. MG	0	0	30.00K	0.00K
BISMARCK	06/16/2010	22:52	Thunderstorm Wind	68 kts. MG	0	0	50.00K	0.00K
BISMARCK AIRPORT	06/16/2010	22:52	Thunderstorm Wind	61 kts. EG	0	0	10.00K	0.00K
ARENA	05/24/2010	19:47	Thunderstorm Wind	78 kts. EG	0	0	400.00K	0.00K
WING	05/24/2010	19:44	Thunderstorm Wind	74 kts. EG	0	0	50.00K	0.00K
DRISCOLL	05/24/2010	19:35	Thunderstorm Wind	74 kts. EG	0	0	200.00K	0.00K
BISMARCK	07/09/2009	00:00	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
BISMARCK	06/22/2009	17:40	Thunderstorm Wind	61 kts. EG	0	0	17.00K	0.00K
BISMARCK AIRPORT	05/12/2009	18:50	Thunderstorm Wind	52 kts. EG	0	0	4.00K	0.00K
BISMARCK AIRPORT	07/30/2008	23:50	Thunderstorm Wind	70 kts. EG	0	0	40.00K	0.00K
BALDWIN	07/30/2008	23:30	Thunderstorm Wind	65 kts. EG	0	0	10.00K	0.00K
BISMARCK AIRPORT	06/26/2008	18:20	Thunderstorm Wind	60 kts. EG	0	0	4.00K	0.00K
MENOKEN	07/01/2007	19:15	Thunderstorm Wind	65 kts. EG	0	0	40.00K	0.00K
REGAN	06/30/2006	19:00	Thunderstorm Wind	57 kts. EG	0	0	2.00K	0.00K
BISMARCK AIRPORT	07/19/2001	22:32	Thunderstorm Wind	66 kts. M	0	0	50.00K	0.00K
BISMARCK	06/25/1999	20:40	Thunderstorm Wind	78 kts.	0	0	2.000M	0.00K
BISMARCK	07/18/1997	04:00	Thunderstorm Wind	65 kts.	0	0	10.00K	0.00K
BISMARCK	05/16/1996	23:12	Thunderstorm Wind	69 kts.	0	0	3.200M	0.00K
Totals:					0	0	9.689M	690.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 12/2024)

Tornado (F1/EF1 and stronger)

Location	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
REGAN	07/16/2011	16:35	CST-6	Tornado	EF1	0	0	10.00K	0.00K
BISMARCK ARPT	06/06/2005	23:02	CST	Tornado	F1	0	0	0.00K	0.00K
BISMARCK	11/01/2000	14:33	CST	Tornado	F2	0	0	55.00K	0.00K
BISMARCK	11/01/2000	13:55	CST	Tornado	F1	0	2	0.00K	0.00K
ARENA	06/25/1999	21:24	CST	Tornado	F1	0	0	0.00K	0.00K
DRISCOLL	06/03/1999	16:50	CST	Tornado	F1	0	0	75.00K	0.00K
BURLEIGH CO.	05/30/1985	13:55	CST	Tornado	F2	0	0	25.00K	0.00K
BURLEIGH CO.	05/10/1985	14:15	CST	Tornado	F1	0	0	25.00K	0.00K
BURLEIGH CO.	05/10/1985	14:12	CST	Tornado	F1	0	0	0.00K	0.00K
BURLEIGH CO.	07/30/1981	18:00	CST	Tornado	F3	0	0	250.00K	0.00K
BURLEIGH CO.	08/03/1980	17:00	CST	Tornado	F1	0	0	2.50K	0.00K
BURLEIGH CO.	06/11/1976	20:32	CST	Tornado	F1	0	0	0.00K	0.00K
BURLEIGH CO.	06/11/1976	16:15	CST	Tornado	F1	0	0	0.00K	0.00K
BURLEIGH CO.	07/16/1957	20:00	CST	Tornado	F2	0	0	2.50K	0.00K
BURLEIGH CO.	06/17/1956	18:30	CST	Tornado	F2	0	0	250.00K	0.00K
BURLEIGH CO.	07/01/1952	18:36	CST	Tornado	F4	0	1	250.00K	0.00K
BURLEIGH CO.	07/01/1952	18:00	CST	Tornado	F4	1	25	250.00K	0.00K
Totals:						1	28	1.195M	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 12/2024)

Hail
(ten-year history plus previous events including death, injury, or damage)

Location	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
REGAN	08/28/2024	18:10	CST-6	Hail	1.25 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	08/28/2024	17:40	CST-6	Hail	1.75 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	08/28/2024	17:35	CST-6	Hail	1.75 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	08/28/2024	17:33	CST-6	Hail	1.75 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	08/28/2024	17:32	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	08/28/2024	17:32	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	07/31/2024	07:45	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BISMARCK	07/31/2024	07:25	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
MC KENZIE	07/29/2024	18:07	CST-6	Hail	2.75 in.	0	0	0.00K	0.00K
BISMARCK	07/29/2024	17:48	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	07/29/2024	16:55	CST-6	Hail	4.50 in.	0	0	10.000M	250.00K
BALDWIN	07/29/2024	16:35	CST-6	Hail	2.50 in.	0	0	2.000M	125.00K
BALDWIN	07/27/2024	20:28	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	07/19/2024	05:43	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BISMARCK	08/01/2023	17:05	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
MOFFIT	07/26/2023	16:50	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	05/09/2023	20:20	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	05/09/2023	19:40	CST-6	Hail	1.75 in.	0	0	500.00K	0.00K
MOFFIT	07/21/2022	15:50	CST-6	Hail	2.00 in.	0	0	0.00K	0.00K
BISMARCK	07/21/2022	15:33	CST-6	Hail	1.75 in.	0	0	400.00K	0.00K
BISMARCK	07/21/2022	15:05	CST-6	Hail	2.50 in.	0	0	1.200M	0.00K
BISMARCK AIRPORT	07/09/2022	10:05	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
DRISCOLL	06/24/2022	17:07	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
BISMARCK	06/20/2022	00:17	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BISMARCK	06/20/2022	00:12	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BALDWIN	07/17/2020	18:15	CST-6	Hail	1.50 in.	0	0	0.00K	0.00K
BALDWIN	07/17/2020	17:55	CST-6	Hail	2.00 in.	0	0	0.00K	0.00K
BISMARCK	07/17/2020	17:48	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
BISMARCK	07/17/2020	17:40	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	09/20/2019	16:03	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
REGAN	08/25/2019	16:55	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	08/25/2019	15:19	CST-6	Hail	2.00 in.	0	0	400.00K	0.00K
BISMARCK AIRPORT	08/06/2019	15:41	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K

STERLING	08/06/2019	15:30	CST-6	Hail	1.75 in.	0	0	30.00K	0.00K
BISMARCK AIRPORT	08/06/2019	15:04	CST-6	Hail	1.50 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	08/06/2019	14:56	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/08/2019	16:46	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/08/2019	16:12	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/08/2019	16:00	CST-6	Hail	1.50 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/08/2019	16:00	CST-6	Hail	1.75 in.	0	0	0.00K	0.00K
MENOKEN	07/02/2019	18:45	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BALDWIN	06/11/2019	14:27	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
FT LINCOLN	09/09/2018	02:05	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	07/24/2018	23:10	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BISMARCK	07/03/2018	23:14	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
BISMARCK	07/03/2018	23:12	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BISMARCK	07/03/2018	23:10	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
FT LINCOLN	06/28/2018	02:00	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	06/28/2018	01:50	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
BISMARCK	07/31/2017	17:35	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
FT LINCOLN	07/31/2017	17:11	CST-6	Hail	1.25 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/21/2017	21:40	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
BISMARCK	07/21/2017	21:25	CST-6	Hail	1.75 in.	0	0	0.00K	0.00K
BISMARCK	07/04/2017	17:10	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BISMARCK	07/04/2017	16:42	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	07/04/2017	16:39	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
FT LINCOLN	06/27/2017	20:40	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	06/27/2017	20:32	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
STERLING	09/07/2016	13:45	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
DRISCOLL	08/31/2016	04:27	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
DRISCOLL	08/31/2016	04:02	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
MOFFIT	07/16/2016	15:51	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
MC KENZIE	07/16/2016	15:12	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
ARENA	07/16/2016	12:40	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BALDWIN	07/16/2016	12:19	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	07/10/2016	20:27	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	07/03/2016	20:00	CST-6	Hail	0.75 in.	0	0	0.00K	0.00K
BISMARCK	07/03/2016	19:45	CST-6	Hail	0.88 in.	0	0	0.00K	0.00K
DRISCOLL	06/17/2016	04:10	CST-6	Hail	2.50 in.	0	0	15.00K	20.00K

DRISCOLL	06/17/2016	04:10	CST-6	Hail	3.00 in.	0	0	50.00K	50.00K
BALDWIN	06/17/2016	03:40	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK	06/17/2016	03:30	CST-6	Hail	3.25 in.	0	0	50.000M	250.00K
BISMARCK	06/17/2016	03:25	CST-6	Hail	1.50 in.	0	0	0.00K	0.00K
MOFFIT	06/13/2015	16:08	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
REGAN	09/04/2014	01:20	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
REGAN	09/04/2014	01:15	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BALDWIN	09/04/2014	01:05	CST-6	Hail	1.50 in.	0	0	0.00K	0.00K
BALDWIN	08/20/2014	18:00	CST-6	Hail	1.25 in.	0	0	0.00K	0.00K
MOFFIT	07/05/2014	19:50	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/05/2014	19:30	CST-6	Hail	1.00 in.	0	0	0.00K	0.00K
BISMARCK AIRPORT	07/10/2011	12:50	CST-6	Hail	1.25 in.	0	0	150.00K	0.00K
FT LINCOLN	07/19/2008	18:45	CST-6	Hail	2.75 in.	0	0	10.00K	0.00K
BISMARCK AIRPORT	07/19/2008	18:20	CST-6	Hail	2.75 in.	0	0	800.00K	0.00K
BISMARCK AIRPORT	06/09/2001	16:55	CST	Hail	1.75 in.	0	0	113.000M	0.00K
NW Bismarck	07/12/1994	19:06	CST	Hail	0.75 in.	0	0	5.00K	0.00K
Wilton	06/21/1994	19:30	CST	Hail	0.75 in.	0	0	0.00K	50.00K
Totals:						0	0	271.575M	845.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 12/2024)

Severe Winter Weather
(Including blizzards, extreme cold, heavy snow, ice storms)

Frequency	Highly Likely (Nearly 100% probability in the next year)
Severity	Critical (25-50% of jurisdiction affected)
Risk Class	A
Seasonal Pattern	November to April
Duration	2 to 5 days
Speed of Onset	12 to 24 hours warning
Location	Countywide

Description
Winter storms occur in many forms and vary significantly in size, strength, intensity, duration, and impact. The winter season can begin as early as September and last into May. Generally, a period from mid-November through early April provides the bulk of winter storms.

Heavy snow can paralyze a community by stranding travelers, stopping the flow commodities, and disrupting emergency services. The weight of snow can cause roofs to collapse and knock down trees and utility lines. Homes and farms may be isolated for days, and unprotected livestock may die. The cost of snow removal, damage repair, and loss of business can have economic impacts on communities.

Blizzard: A storm which contains large amounts of snow OR blowing snow, with winds in excess of 35 mph and visibilities of less than 1/4 mile for an extended period of time (at least 3 hours) as defined by the National Weather Service.

Extreme Cold: Dangerously low temperatures and wind chills capable of causing frostbite and hypothermia (ND Criteria for Extreme Cold is “An apparent temperature of -40F, based on the combination of actual air temp and/or wind chill”).

Heavy Snow: Snowfall of 6” or more in 12 hours or 8” or more in 24 hours.

Ice Storm: A winter event with significant accumulations of ice (typically ¼” or more).

Winter Storm: A hazardous, life-threatening event featuring significant snow, sleet, or freezing rain, often accompanied by strong winds and low temperatures.

Snow Squall: A brief, intense burst of heavy snow and strong, gusty winds that causes quick, significant reductions in visibility (whiteout conditions), rapidly falling temperatures, and sudden flash freezes on roads.

High Wind: Sustained winds reach or exceed 40 mph for at least one hour, or when instantaneous gusts reach 58 mph or higher for any duration.

Beaufort Wind Chart – Estimating Winds Speeds

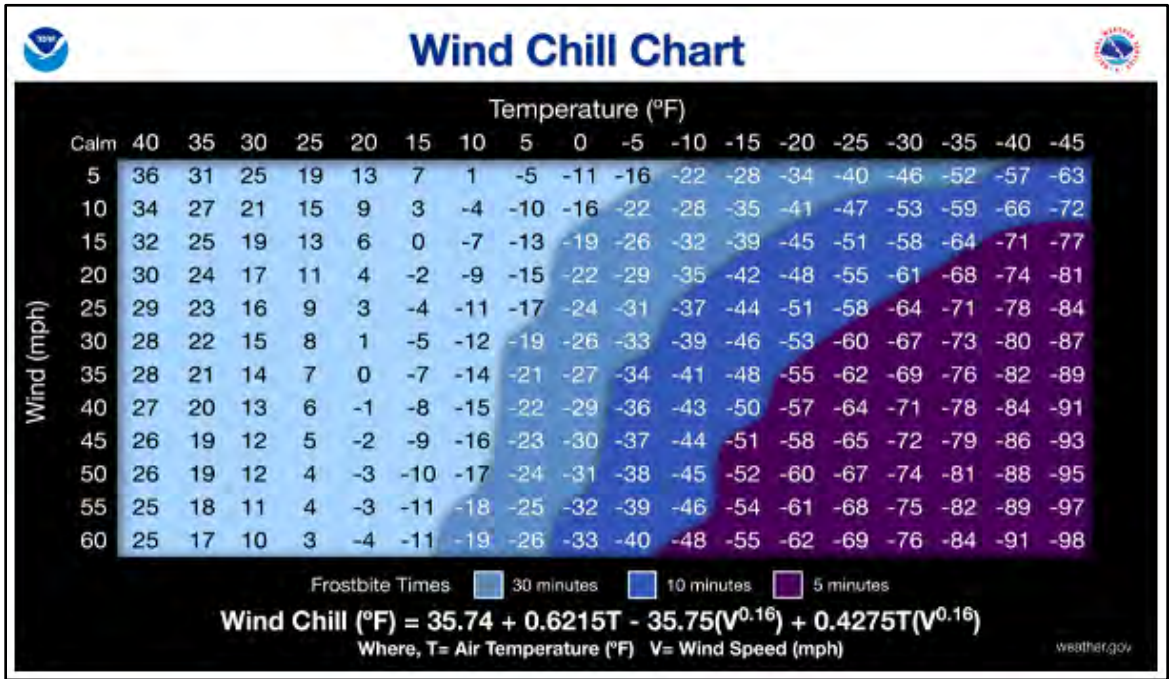
Beaufort Number	MPH Range	MPH Average	Terminology	Description
0	0	0	Calm	Calm. Smoke rises vertically.
1	1-3	2	Light air	Wind motion visible in smoke.
2	4-7	6	Light breeze	Wind felt on exposed skin. Leaves rustle.
3	8-12	11	Gentle breeze	Leaves and smaller twigs in constant motion.
4	13-18	15	Moderate 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.**

Source: National Weather Service

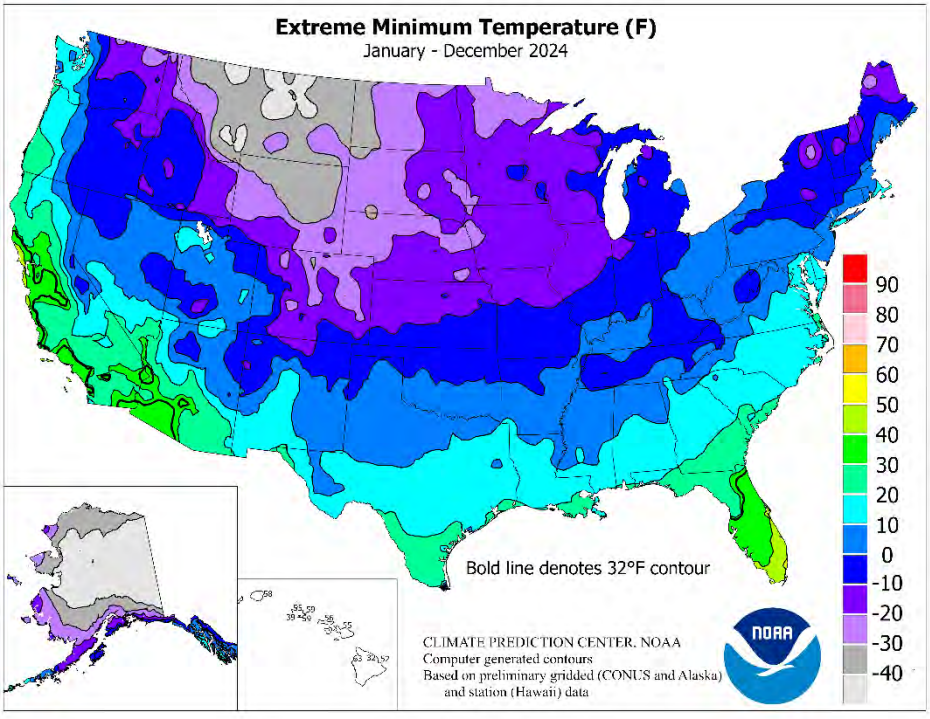
Identified Impacts

- Blocked Roads
- Building Collapse
- Business Interruptions
- Delayed Emergency Response
- Downed Power Lines
- Downed Trees
- Evacuation (Localized)
- HAZMAT Release
- Increased Fire Potential
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Potable Water
- Loss of Power
- Property Damage
- School Closure
- Wind Chill

Wind Chill: The wind chill temperature is how cold people and animals feel when outside. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature. Therefore, the wind makes it FEEL much colder. If the temperature is 0°F and the wind is blowing at 15 mph, the wind chill is -19°F. At this wind chill temperature, exposed skin can freeze in 30 minutes.



Source: National Weather Service, National Oceanic and Atmospheric Administration



Source: Climate Prediction Center

History:

Severe Winter Weather Events
Blizzard, Heavy Snow, Ice Storm, Winter Storm, Winter Weather
(ten-year history plus previous events including death, injury, or damage)

Location	Date	Time	T.Z.	Type	Dth	Inj	PrD	CrD
BURLEIGH	3/24/2024	3:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	12/26/2023	0:00	CST-6	Ice Storm	0	0	50.00K	0.00K
BURLEIGH	10/26/2023	1:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	4/4/2023	14:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	3/17/2023	12:00	CST-6	Winter Weather	0	0	0.00K	0.00K
BURLEIGH	3/11/2023	3:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	3/5/2023	9:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	3/1/2023	0:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	2/28/2023	13:00	CST-6	Winter Weather	0	0	0.00K	0.00K
BURLEIGH	12/22/2022	11:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	12/15/2022	12:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	12/13/2022	8:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	11/10/2022	6:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	4/12/2022	6:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	2/20/2022	21:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	12/26/2021	12:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	12/8/2019	13:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	11/30/2019	4:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	10/10/2019	21:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	3/13/2019	22:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	3/9/2019	1:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	2/3/2019	12:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	12/26/2018	9:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	11/16/2018	5:00	CST-6	Heavy Snow	0	0	250.00K	0.00K
BURLEIGH	3/5/2018	7:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	1/2/2017	9:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	12/25/2016	14:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	12/5/2016	20:00	CST-6	Blizzard	0	0	0.00K	0.00K
BURLEIGH	11/27/2016	22:00	CST-6	Heavy Snow	0	0	0.00K	0.00K
BURLEIGH	4/2/2010	4:00	CST-6	Winter Storm	0	0	2.000M	0.00K
BURLEIGH	3/30/2007	5:00	CST-6	Ice Storm	0	0	25.00K	0.00K
BURLEIGH	12/30/2006	4:00	CST-6	Heavy Snow	0	0	40.00K	0.00K
BURLEIGH	1/20/2006	7:00	CST	Winter Weather	0	0	15.00K	0.00K
BURLEIGH	12/29/2005	11:45	CST	Winter Weather	0	0	25.00K	0.00K
MC KENZIE	11/20/1997	18:00	CST	Winter Weather	1	12	20.00K	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 12/2024)

Extreme Cold

(ten-year history plus previous events including death, injury, or damage)

Location	Date	Time	T.Z.	Type	Dth	Inj	PrD	CrD
BURLEIGH	02/16/2025	18:00	CST-6	Extreme Cold/wind Chill	0	0	0.00K	0.00K
BURLEIGH	01/18/2025	20:00	CST-6	Cold/wind Chill	0	0	0.00K	0.00K
BURLEIGH	01/12/2024	19:00	CST-6	Cold/wind Chill	0	0	0.00K	0.00K
BURLEIGH	02/10/2021	20:00	CST-6	Extreme Cold/wind Chill	0	0	0.00K	0.00K
BURLEIGH	01/29/2019	00:00	CST-6	Extreme Cold/wind Chill	0	0	0.00K	0.00K
BURLEIGH	01/29/1996	12:00	CST	Cold/wind Chill	1	0	0.00K	0.00K
Totals:					1	0	0.00K	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 10/2025)

High Wind (November-April)

(ten-year history plus previous events including death, injury, or damage)

Location	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
BURLEIGH	03/10/2025	10:00	CST-6	High Wind	52 kts. EG	0	0	0.00K	0.00K
BURLEIGH	11/06/2022	03:00	CST-6	High Wind	56 kts. MG	0	0	0.00K	0.00K
BURLEIGH	04/06/2022	10:00	CST-6	High Wind	50 kts. MG	0	0	0.00K	0.00K
BURLEIGH	02/01/2022	00:00	CST-6	High Wind	53 kts. MG	0	0	0.00K	0.00K
BURLEIGH	01/31/2022	18:00	CST-6	High Wind	53 kts. MG	0	0	0.00K	0.00K
BURLEIGH	11/17/2021	00:00	CST-6	High Wind	50 kts. MG	0	0	0.00K	0.00K
BURLEIGH	11/13/2021	15:00	CST-6	High Wind	54 kts. MG	0	0	0.00K	0.00K
BURLEIGH	02/22/2021	10:00	CST-6	High Wind	53 kts. MG	0	0	0.00K	0.00K
BURLEIGH	01/14/2021	00:00	CST-6	High Wind	62 kts. MG	0	0	75.00K	0.00K
BURLEIGH	12/22/2020	22:00	CST-6	High Wind	35 kts. MS	0	0	0.00K	0.00K
BURLEIGH	03/01/2020	08:00	CST-6	High Wind	51 kts. MG	0	0	0.00K	0.00K
BURLEIGH	01/04/2020	22:00	CST-6	High Wind	54 kts. MG	0	0	0.00K	0.00K
BURLEIGH	01/27/2019	17:00	CST-6	High Wind	57 kts. MG	0	0	0.00K	0.00K
BURLEIGH	11/29/2017	11:00	CST-6	High Wind	59 kts. MG	0	0	0.00K	0.00K
BURLEIGH	03/07/2017	06:00	CST-6	High Wind	57 kts. MG	0	0	0.00K	0.00K
BURLEIGH	01/30/2017	09:00	CST-6	High Wind	38 kts. MS	0	0	0.00K	0.00K
BURLEIGH	02/07/2016	00:00	CST-6	High Wind	54 kts. MG	0	0	0.00K	0.00K
BURLEIGH	02/13/2011	09:00	CST-6	High Wind	38 kts. MS	0	0	20.00K	0.00K
BURLEIGH	05/25/2010	09:00	CST-6	High Wind	52 kts. EG	0	0	30.00K	0.00K
BURLEIGH	10/26/2008	12:47	CST-6	High Wind	51 kts. MG	0	0	50.00K	0.00K
BURLEIGH	05/01/2008	18:00	CST-6	High Wind	52 kts. EG	0	0	15.00K	0.00K
BURLEIGH	12/11/2004	18:00	CST	High Wind	42 kts. MS	0	1	0.00K	0.00K
BURLEIGH	04/05/2000	08:30	CST	High Wind	62 kts. M	0	10	0.00K	0.00K
Totals:						0	11	190.00K	0.00K

Source: National Oceanic and Atmospheric Administration National Climatic Data Center (01/1950 to 10/2025)

Space Weather

Frequency	Likely (10–100% probability in the next year, or at least 1 chance in next 10 years)
Severity	Critical (25-50% of jurisdiction affected)
Risk Class	B
Seasonal Pattern	None
Duration	Days/Weeks
Speed of Onset	Little to no warning
Location	Countywide

Description

Space Weather refers to variations in the space environment between the sun and Earth (and throughout the solar system) that can affect technologies in space and on Earth. Space weather is primarily driven by solar storm phenomenon that include coronal mass ejections, solar flares, solar particle events and solar wind. These phenomena can occur in various regions on the sun's surface, but only Earth directed solar storms are potential drivers of space weather events on Earth. An understanding of solar storm phenomena is an important component to developing accurate space weather forecasts (event onset, location, duration, and magnitude).

Why does space weather matter?

Space weather is a global issue. Unlike terrestrial weather events, like a hurricane, space weather has the potential to impact not only the United States, but wider geographic regions. These complex events can have significant economic consequences and have the potential to negatively affect numerous sectors, including communications, satellite and airline operations, manned space flights, navigation and surveying systems, as well as the electric power grid.

Source: NOAA Space Weather Prediction Center

NOAA Space Weather Scales
Source: NOAA National Weather Service Space Weather Prediction Center

The NOAA Space Weather Scales were introduced as a way to communicate to the general public the current and future space weather conditions and their possible effects on people and systems. Many of the SWPC products describe the space environment, but few have described the effects that can be experienced as the result of environmental disturbances. These scales are useful to users of our products and those who are interested in space weather effects. The scales describe the environmental disturbances for three event types: geomagnetic storms, solar radiation storms, and radio blackouts. The scales have numbered levels, analogous to hurricanes, tornadoes, and earthquakes that convey severity. They list possible effects at each level. They also show how often such events happen and give a measure of the intensity of the physical causes.

Geomagnetic Storm

Scale	Description	Effect	Physical measure	Average Frequency (1 cycle = 11 years)
G 5	Extreme	**Power systems:** Widespread voltage control problems and protective system problems can occur, some grid systems may experience complete collapse or blackouts. Transformers may experience damage. **Spacecraft operations:** May experience extensive surface charging, problems with orientation, uplink/downlink and tracking satellites. **Other systems:** Pipeline currents can reach hundreds of amps, HF (high frequency) radio propagation may be impossible in many areas for one to two days, satellite navigation may be degraded for days, low-frequency radio navigation can be out for hours, and aurora has been seen as low as Florida and southern Texas (typically 40° geomagnetic lat.).	Kp = 9	4 per cycle (4 days per cycle)
G 4	Severe	**Power systems:** Possible widespread voltage control problems and some protective systems will mistakenly trip out key assets from the grid. **Spacecraft operations:** May experience surface charging and tracking problems, corrections may be needed for orientation problems. **Other systems:** Induced pipeline currents affect preventive measures, HF radio propagation sporadic, satellite navigation degraded for hours, low-frequency radio navigation disrupted, and aurora has been seen as low as Alabama and northern California (typically 45° geomagnetic lat.).	Kp = 8, including a 9-	100 per cycle (60 days per cycle)
G 3	Strong	**Power systems:** Voltage corrections may be required, false alarms triggered on some protection devices. **Spacecraft operations:** Surface charging may occur on satellite components, drag may increase on low-Earth-orbit satellites, and corrections may be needed for orientation problems. **Other systems:** Intermittent satellite navigation and low-frequency radio navigation problems may occur, HF radio may be intermittent, and aurora has been seen as low as Illinois and Oregon (typically 50° geomagnetic lat.).	Kp = 7	200 per cycle (130 days per cycle)
G 2	Moderate	**Power systems:** High-latitude power systems may experience voltage alarms, long-duration storms may cause transformer damage. **Spacecraft operations:** Corrective actions to orientation may be required by ground control; possible changes in drag affect orbit predictions. **Other systems:** HF radio propagation can fade at higher latitudes, and aurora has been seen as low as New York and Idaho (typically 55° geomagnetic lat.).	Kp = 6	600 per cycle (360 days per cycle)
G 1	Minor	**Power systems:** Weak power grid fluctuations can occur. **Spacecraft operations:** Minor impact on satellite operations possible. **Other systems:** Migratory animals are affected at this and higher levels; aurora is commonly visible at high latitudes (northern Michigan and Maine).	Kp = 5	1700 per cycle (900 days per cycle)

Solar Radiation Storms

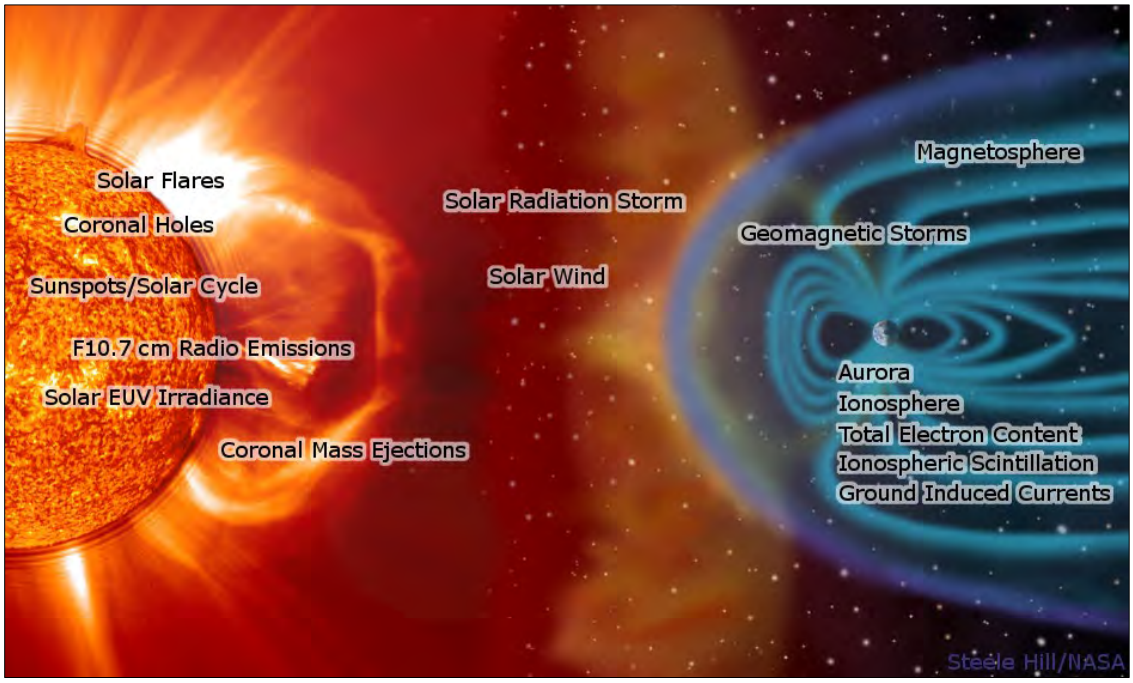
Scale	Description	Effect	Physical measure (Flux level of >= 10 MeV particles)	Average Frequency (1 cycle = 11 years)
S 5	Extreme	**Biological:** Unavoidable high radiation hazard to astronauts on EVA (extra-vehicular activity); passengers and crew in high-flying aircraft at high latitudes may be exposed to radiation risk. **Satellite operations:** Satellites may be rendered useless, memory impacts can cause loss of control, may cause serious noise in image data, star-trackers may be unable to locate sources; permanent damage to solar panels possible. **Other systems:** Complete blackout of HF (high frequency) communications possible through the polar regions, and position errors make navigation operations extremely difficult.	10^5	Fewer than 1 per cycle
S 4	Severe	**Biological:** Unavoidable radiation hazard to astronauts on EVA; passengers and crew in high-flying aircraft at high latitudes may be exposed to radiation risk. **Satellite operations:** May experience memory device problems and noise on imaging systems; star-tracker problems may cause orientation problems, and solar panel efficiency can be degraded. **Other systems:** Blackout of HF radio communications through the polar regions and increased navigation errors over several days are likely.	10^4	3 per cycle
S 3	Strong	**Biological:** Radiation hazard avoidance recommended for astronauts on EVA; passengers and crew in high-flying aircraft at high latitudes may be exposed to radiation risk. **Satellite operations:** Single-event upsets, noise in imaging systems, and slight reduction of efficiency in solar panel are likely. **Other systems:** Degraded HF radio propagation through the polar regions and navigation position errors likely.	10^3	10 per cycle
S 2	Moderate	**Biological:** Passengers and crew in high-flying aircraft at high latitudes may be exposed to elevated radiation risk. **Satellite operations:** Infrequent single-event upsets possible. **Other systems:** Small effects on HF propagation through the polar regions and navigation at polar cap locations possibly affected.	10^2	25 per cycle
S 1	Minor	**Biological:** None. **Satellite operations:** None. **Other systems:** Minor impacts on HF radio in the polar regions.	10	50 per cycle

Radio Blackouts Scale

Scale	Description	Effect	Physical measure	Average Frequency (1 cycle = 11 years)
R 5	Extreme	**HF Radio:** Complete HF (high frequency) radio blackout on the entire sunlit side of the Earth lasting for a number of hours. This results in no HF radio contact with mariners and en route aviators in this sector. **Navigation:** Low-frequency navigation signals used by maritime and general aviation systems experience outages on the sunlit side of the Earth for many hours, causing loss in positioning. Increased satellite navigation errors in positioning for several hours on the sunlit side of Earth, which may spread into the night side.	X20 (2×10^{-3})	Less than 1 per cycle
R 4	Severe	**HF Radio:** HF radio communication blackout on most of the sunlit side of Earth for one to two hours. HF radio contact lost during this time. **Navigation:** Outages of low-frequency navigation signals cause increased error in positioning for one to two hours. Minor disruptions of satellite navigation possible on the sunlit side of Earth.	X10 (10^{-3})	8 per cycle (8 days per cycle)
R 3	Strong	**HF Radio:** Wide area blackout of HF radio communication, loss of radio contact for about an hour on sunlit side of Earth. **Navigation:** Low-frequency navigation signals degraded for about an hour.	X1 (10^{-4})	175 per cycle (140 days per cycle)
R 2	Moderate	**HF Radio:** Limited blackout of HF radio communication on sunlit side, loss of radio contact for tens of minutes. **Navigation:** Degradation of low-frequency navigation signals for tens of minutes.	M5 (5×10^{-5})	350 per cycle (300 days per cycle)
R 1	Minor	**HF Radio:** Weak or minor degradation of HF radio communication on sunlit side, occasional loss of radio contact. **Navigation:** Low-frequency navigation signals degraded for brief intervals.	M1 (10^{-5})	2000 per cycle (950 days per cycle)

Impacts

Source: NOAA National Weather Service Space Weather Prediction Center



Space Weather Impacts on Climate

All weather on Earth, from the surface of the planet out into space, begins with the Sun. Space weather and terrestrial weather (the weather we feel at the surface) are influenced by the small changes the Sun undergoes during its solar cycle.

The most important impact the Sun has on Earth is from the brightness or irradiance of the Sun itself. The Sun produces energy in the form of photons of light. The variability of the Sun's output is wavelength dependent; different wavelengths have higher variability than others. Most of the energy from the Sun is emitted in the visible wavelengths (approximately 400 – 800 nanometers (nm)). The output from the sun in these wavelengths is nearly constant and changes by only one part in a thousand (0.1%) over the course of the 11-year solar cycle.

Electric Power Transmission

The electric power grid, and consequently the power to your home and business, can be disrupted by space weather. One of the great discoveries of the 19th century was the realization that a time-varying magnetic field is able to produce an electrical current in a conducting wire. The basic idea is that the time rate of change of the magnetic flux (i.e. lines of magnetic force) passing through a current loop is proportional to the current that is generated around the loop. A slightly earlier but equally important discovery was that a current-carrying wire produces a magnetic field. The application of these principles is widely prevalent in modern society in electrical power generators, electrical power transformers, and electrical motors, for example.

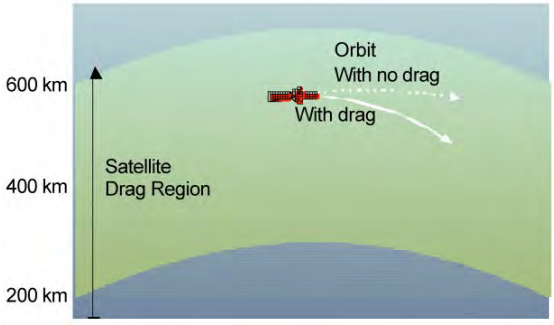
HF Radio Communications

Space weather impacts radio communication in a number of ways. At frequencies in the 1 to 30 mega Hertz range (known as "High Frequency" or HF radio), the changes in ionospheric density and structure modify the transmission path and even block transmission of HF radio signals completely. These frequencies are used by amateur (ham) radio operators and many industries such as commercial airlines. They are also used by a number of government agencies such as the Federal Emergency Management Agency and the Department of Defense.

Satellite Communications

Satellite communication refers to any communication link that involves the use of an artificial satellite in its propagation path. Satellite communications play a vital role in modern life. There are over 2000 artificial satellites in use. They can be found in geostationary, Molniya, elliptical, and low Earth orbits and are used for traditional point-to-point communications, mobile applications, and the distribution of TV and radio programs.

Satellite Drag



Drag is a force exerted on an object moving through a fluid, and it is oriented in the direction of relative fluid flow. Drag acts opposite to the direction of motion and tends to slow an object. As an example, think of running against a high wind and feeling the drag pushing you back in the direction of relative fluid flow. This same force acts on spacecraft and objects flying in the space environment. Drag has a significant impact on spacecraft in low Earth orbit (LEO), generally defined as an orbit below an altitude of approximately 2,000 kilometers (1,200 mi). Although the air density is much lower than near the Earth's surface, the air resistance in those layers of the atmosphere where satellites in LEO travel is still strong enough to produce drag and pull them closer to the Earth. The International Space Station (ISS) and the Hubble Space Telescope are examples of spacecraft operating in LEO.

Space Weather and GPS Systems

The use of single and dual frequency satellite radio navigation systems, like the Global Positioning System (GPS), has grown dramatically in the last decade. GPS receivers are now in nearly every cell phone and in many automobiles, trucks, and any equipment that moves and needs precision location measurements. High precision dual frequency GPS systems are used for farming, construction, exploration, surveying, snow removal and many other applications critical to a functional society. Other satellite navigation systems in orbit include the European Galileo system and the Russian GLONASS system.

Identified Impacts

- Blocked Roads
- Business Interruptions
- Delayed Emergency Response
- Increased Fire Potential
- Increased Public Safety Runs
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Power
- Mass Casualties
- Property Damage
- School Closure

History

There is no significant history of space weather within the County.

For G4/S4/R4 or higher events (at least 1 in next 10 years, documented 5 in last 5 years). Space Weather article in the 2025 ND Mitigation Progress Report (pp.32-38), and 2024 ND eMAOP (pp.518-522).

Transportation Accident

(Including vehicular, railway, and aircraft accidents)

Frequency	Likely (10-100% probability in the next year, or at least 1 chance in next 10 years.)
Severity	Negligible (Less than 10% of jurisdiction affected)
Risk Class	C
Seasonal Pattern	None
Duration	Hours
Speed of Onset	No warning
Location	Countywide

Description

A transportation accident is any large-scale aircraft, railroad, or vehicular accident involving mass casualties.

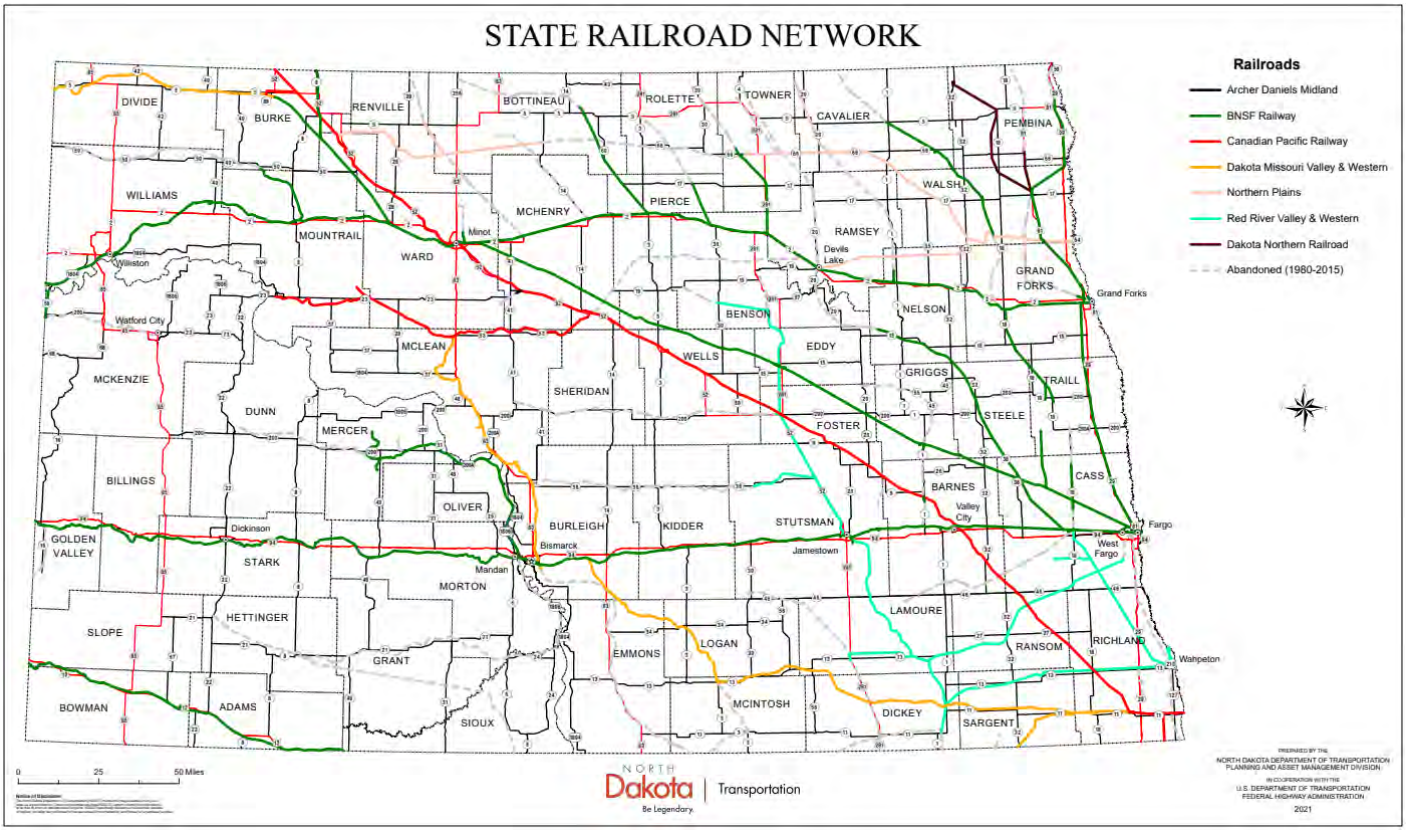
Burleigh County has one municipal airport, railroads, and several major highways.

Vehicle

Interstate 94 is a primary, east/west transportation route intersecting Burleigh County and the City of Bismarck and is north of the City of Lincoln. U.S. Highway 83 is the second most utilized route and runs north/south, intersecting Burleigh County and the Cities of Bismarck and Wilton. The most predominant products observed in the study were anhydrous ammonia and gasolines. (See Attachment 3, Major Roadways in Burleigh County)

Railroad

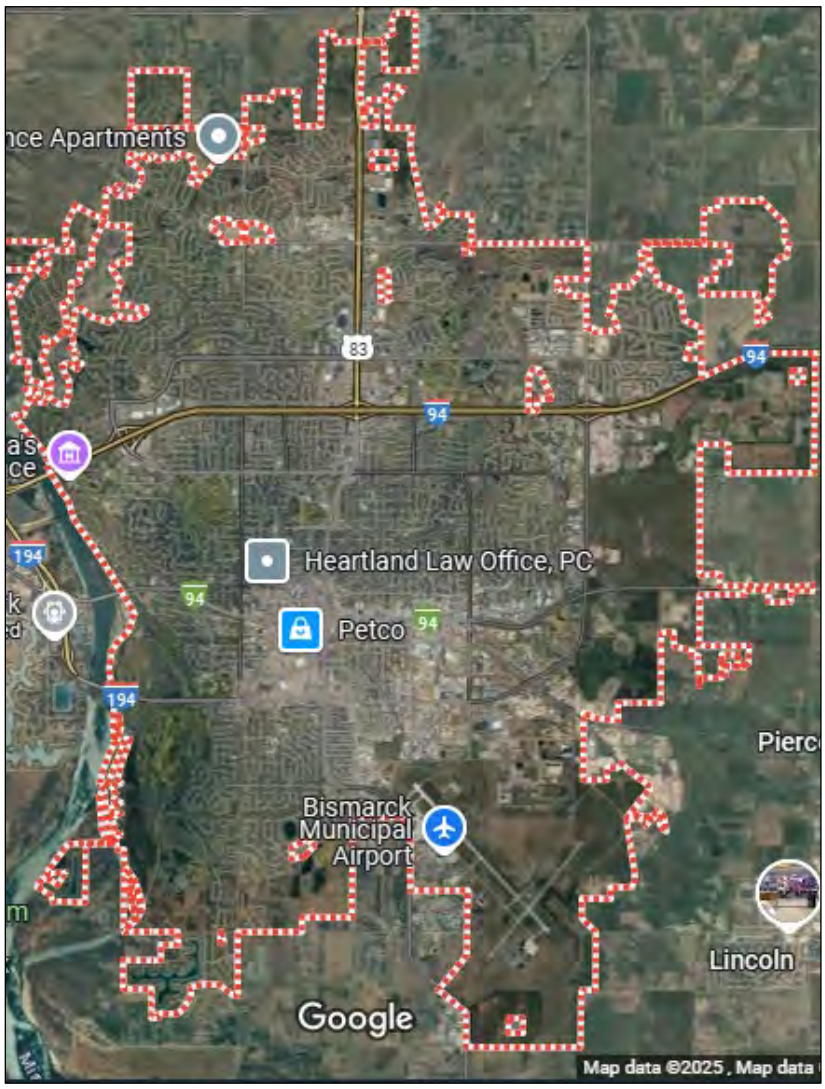
Two railroads traverse the county: Burleigh Northern Santa Fe (BNSF) and the Dakota, Missouri Valley Western Railroad (DMVW).



Source: [ND Department of Transportation]

Airport

The Bismarck Municipal Airport is in the southeast corner of the City of Bismarck.



Source: Google Map

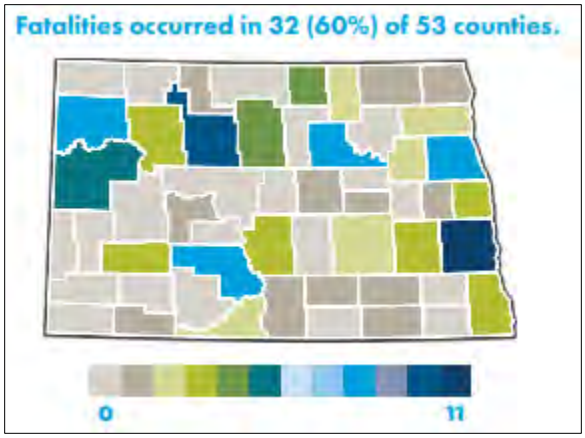
Identified Impacts

- Blocked Roads
- Business Interruptions
- Delayed Emergency Response
- Evacuation (Localized)
- Explosion
- HAZMAT Release
- Increased Public Safety Runs
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Mass Casualties
- Property Damage

History

Vehicle

Burleigh County had 2,173 crashes, 3 fatalities, and 70 injuries in 2023.



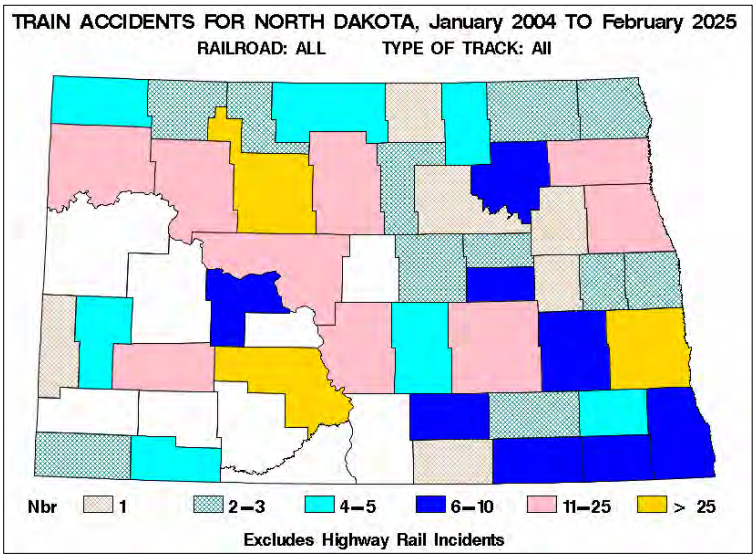
North Dakota Motor Vehicle Crashes, Fatalities and Injuries 2014-2023

Year	Crashes	Fatalities	Injuries
2014	16,134	135	5,278
2015	15,077	131	4,917
2016	15,017	113	4,614
2017	15,280	116	4,432
2018	15,242	105	4,230
2019	14,221	100	4,258
2020	8,820	100	3,426
2021	9,585	101	3,947
2022	10,734	98	3,763
2023	10,475	106	2,828

Source: 2023 North Dakota Crash Summary, North Dakota Department of Transportation

There is no history of mass casualty within Burleigh County.

Railroad

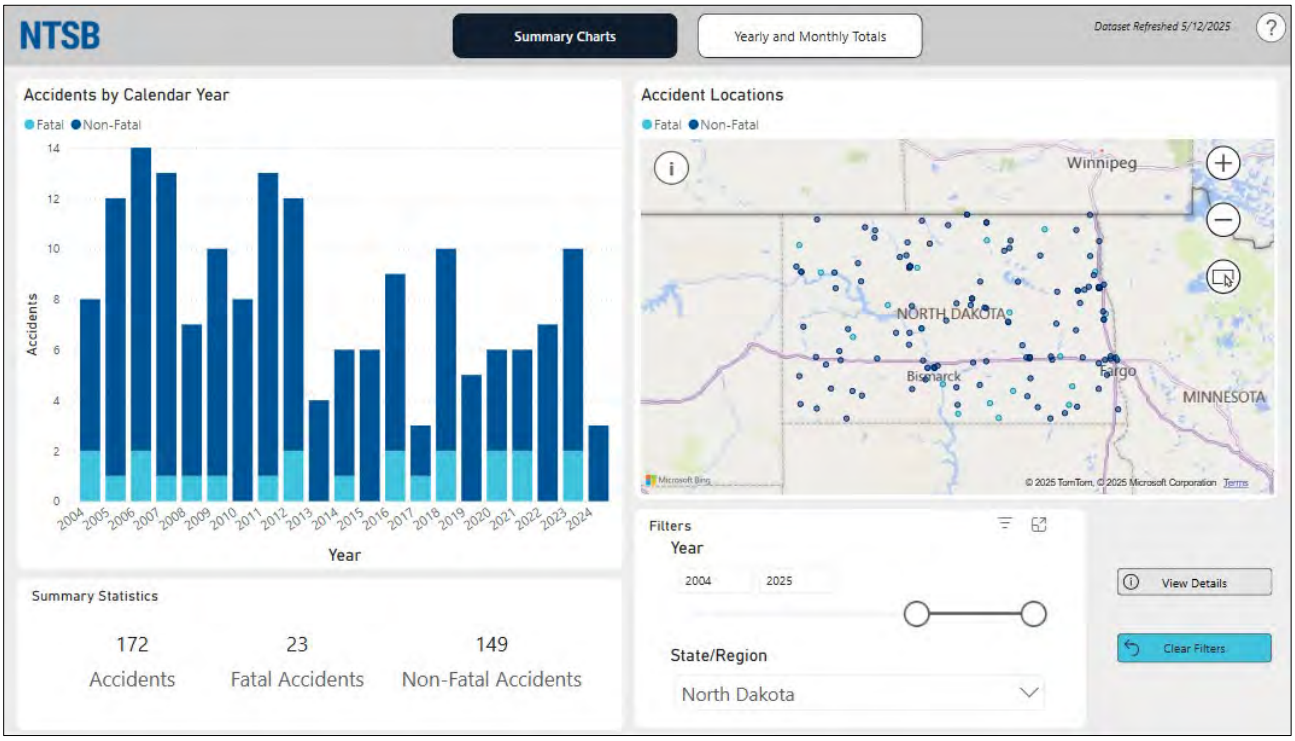


County	Totals				Type of Accident			Causes			
	Accs	Kld	Inj	Reportable Damage	Coll	Der	Othr	Eqp	Hmn	Othr	Trk
ADAMS	4	0	0	1,905,543	-	4	-	1	1	1	1
BARNES	6	0	0	1,009,060	-	6	-	3	1	-	2
BENSON	1	0	0	1,075,302	-	1	-	-	-	-	1
BILLINGS	4	0	0	3,204,620	-	4	-	2	1	-	1
BOTTINEAU	4	0	0	1,177,070	-	4	-	-	-	1	3
BOWMAN	2	0	0	357,226	-	2	-	1	-	-	1
BURKE	3	0	0	54,167	-	3	-	1	1	-	1
BURLEIGH	11	0	0	7,033,571	-	10	1	2	2	1	6
CASS	38	0	5	25,130,993	1	32	5	9	9	3	17
CAVALIER	3	0	0	162,732	-	3	-	-	-	1	2
DICKEY	6	0	0	1,276,088	-	6	-	-	2	-	4
DIVIDE	4	0	0	512,544	-	4	-	-	1	-	3
EDDY	2	0	0	270,508	-	1	1	-	1	-	1
FOSTER	9	0	2	10,217,044	-	8	1	1	3	1	4
GOLDEN VALLEY	1	0	0	36,928	-	1	-	-	1	-	-
GRAND FORKS	24	0	0	1,439,397	3	18	3	3	14	-	7
GRIGGS	1	0	0	4,557,879	-	1	-	-	-	1	-
KIDDER	4	0	0	3,361,700	-	4	-	2	-	1	1
LA MOURE	3	0	0	79,427	-	3	-	-	-	-	3
LOGAN	7	0	0	346,726	-	5	2	-	1	2	4
MCHENRY	11	0	0	2,859,260	-	8	3	3	2	2	4
MCINTOSH	1	0	0	131,750	-	1	-	-	-	-	1
MCLEAN	16	1	2	2,399,041	-	16	-	2	2	2	10
MERCER	9	0	0	647,139	-	9	-	1	-	2	6
MORTON	31	0	0	3,703,220	4	19	8	3	20	2	6
MOUNTRAIL	18	0	0	7,015,267	-	15	3	3	5	2	8
NELSON	1	0	0	130,000	1	-	-	-	1	-	-
PEMBINA	2	0	0	278,052	-	2	-	-	-	-	2
PIERCE	3	0	0	878,183	-	3	-	-	-	-	3
RAMSEY	7	0	1	420,203	-	6	1	1	2	1	3
RANSOM	4	0	0	179,048	-	2	2	-	2	1	1
RENVILLE	2	0	0	68,800	-	2	-	-	-	1	1
RICHLAND	9	0	0	3,505,454	-	9	-	1	4	1	3
ROLETTE	1	0	0	24,280	-	1	-	-	-	1	-
SARGENT	7	0	0	2,615,366	-	7	-	-	-	1	6
STARK	13	0	0	2,519,196	-	13	-	1	7	3	2
STEELE	2	0	0	305,052	-	2	-	-	1	-	1
STUTSMAN	23	0	0	4,027,990	-	21	2	6	2	6	9
TOWNER	4	0	0	1,179,669	-	4	-	-	1	1	2
TRAILL	3	0	0	759,955	-	3	-	-	1	-	2
WALSH	11	0	0	2,171,117	-	11	-	1	-	-	10
WARD	56	0	0	7,187,953	3	43	10	10	32	-	14
WELLS	3	0	0	3,579,352	-	2	1	2	1	-	-
WILLIAMS	21	1	0	14,747,938	1	16	4	2	9	3	7

Causes: Eqp=Equipment Defect Hmn=Human factor Sig=Signal Defect Trk=Track Defect Othr=Other
Excludes Highway Rail Incidents

Source: Federal Railroad Administration Office of Safety Analysis

Aviation



Source: [National Transportation Safety Board]

There were six events in Burleigh County from 2004-2025 with no fatalities.

Plan Maintenance

Monitoring, Evaluating, and Updating the Plan

Plan Maintenance Schedule			
Maintenance Step	**When**	**How**	**Who**
Monitoring	Yearly	Obtain status updates on mitigation actions and identify possible mid-course corrections.	Emergency Manager
Evaluating	Yearly or after a disaster event	Review plan and any lessons learned	Emergency Manager Planning Department
Updating	Every 5 years	Review and update plan as necessary	Emergency Manager Planning Department

The plan will be evaluated annually by the Burleigh County Emergency Manager with input from planning committee members. As a means of monitoring the plan and progress made on the projects, the Burleigh County Emergency Manager will collaborate with planning committee members and representatives identified as "lead agencies" to discuss progress of the projects, existing and potential grant opportunities, how effective they think the process was and the actual action implementation, and any changes in regulations. It will be the responsibility of the Emergency Manager to update the hazard history sections on an annual basis as events occur. The Burleigh County Emergency Manager will also lead a comprehensive update every five years seeking Federal Emergency Management Agency approval.

All disaster or emergency incidents will be evaluated for general/specific mitigation recommendations to be added to the plan as they occur. A comprehensive plan review by the planning committee will occur every five years unless the need arises earlier through aforementioned reviews and actions.

The approved plan is available on the Burleigh County website for review by stakeholders and the public along with the opportunity to submit mitigation ideas at any time. Burleigh County Emergency Management will continue to promote mitigation actions and seek projects through speaking engagements, social media, and after actual events.

Burleigh County Emergency Management
4200 Coleman St
Bismarck ND 58503
(701) 222-6727
burleigh.gov

Mitigation Project Monitoring

Project _____

Responsible Agency/Lead _____

Status ☐ Not Started ☐ In-Progress ☐ Completed ☐ Deleted ☐ Ongoing

Timeline/Completion Date _____

Progress Notes/Comments _____
_____
_____

Funding Source _____

Cost Estimate _____

Date _____

Completed By _____

Plan Integration: The Burleigh County Multi-Hazard Mitigation Plan will be considered as building codes are developed and/or updated. The awareness of the hazards and vulnerability may affect future development in hazard-prone areas.

The Comprehensive Plan for Burleigh County (page 8) ties all other plans to the Burleigh County Multi-Hazard Mitigation Plan:

> "Objective 5: Ensure that the County is prepared to address Emergency Management incidents.
>
> Policy: #1 Review and update contingency plans for all hazards identified in the Burleigh County Multi-Hazard Mitigation Plan.
>
> #2 Review and address opportunities for mitigation of potential damage, such as, prohibiting developments in areas of high flood probability.
>
> #3 Encourage County Departments and Boards to review and update emergency policies and procedures.
>
> #4 Ensure that all developments are established with the safety of current and future users in mind."

The Cities of Lincoln, Regan, Wilton, and Wing will incorporate data from this plan when reviewing their planning and regulatory capabilities (Attachment 4). The City of Regan does not have the funding and staffing to incorporate robust activities in their regulations, plans, and programs.

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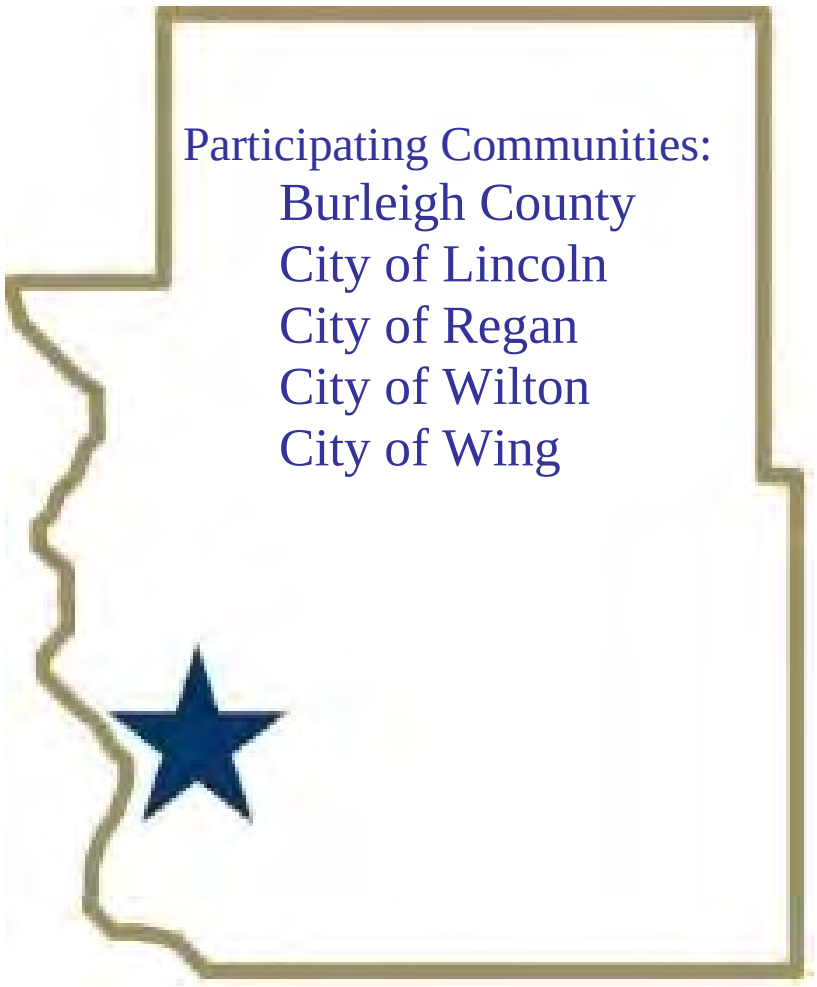
Burleigh County
Multi-Hazard Mitigation Plan
Attachments



Participating Communities:

Burleigh County
City of Lincoln
City of Regan
City of Wilton
City of Wing

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ATTACHMENT 1: MITIGATION PROJECTS

Mitigation opportunities submitted on priority basis except where urgent/special circumstances warrant highest priority. The emphasis may be the cost benefit review of the proposed mitigation project and the lead agency's ability to provide funding. Implementation and administration of the projects will be through the Burleigh County Emergency Manager unless dictated by the unique specialty or level of expertise needed for the project.

The goals (priorities) remain unchanged from the previous plan. Three goals were identified to provide the general guidance for mitigation activities:

- Protect public health and safety.
- Minimize damage to existing and future property.
- Minimize economic losses and disruption of essential community services.

Projects were prioritized (low, medium, high) during groups meetings, individual input, and group e-mails. Processes included looking at previous history as well as current and projected conditions.

Changes

Burleigh County:

- Sibley Island Flood Control—Sibley Island properties remain vulnerable to flooding from the Missouri River. (Properties voted against, removed)
- Hazardous Materials Routes—Develop and distribute map. (Not legal to designate routes, removed)
- Website yearly accessibility scan (New project)
- National Flood Insurance Program: Consider participation in the Community Rating System (Process started in 2024)
- University of Mary bank stabilization (Completed)

City of Lincoln:

- City Hall—New construction at city center (EOC, Polling Site, Commission Meetings, Training). Existing building would be retained by the Police Department. (New project)
- Lincoln City Hall—Backup Power Source (Grant awarded)
- Lincoln Public Works—Backup Power Source (Grant awarded)

City of Regan: No changes.

City of Wilton:

- Wilton Ambulance—Backup Power Source (completed)
- Wilton City Hall (EOC) —Backup Power Source (applied for grant)

City of Wing:

- Chemical House (Removed, facility demolished)
- Living Snow Fences—Continue to promote living snow fences and shelterbelts to prevent snow drifting and protection from severe summer weather and windstorms. (New project)

Public Input:
The three highest hazards deemed “Highly Likely” (Severe Summer Weather, Fire, and Severe Winter Weather) through the online survey and stakeholder input. Majority of responses indicated recommendations for education, preparedness, burn restrictions which align with existing projects.

Items removed not deemed mitigation projects with long term risk reduction:

- Automatic Notification System—Continue to promote "opt-in" of community.
- Emergency Planning—Continue to evaluate and update current plans.
- Vulnerable Population Registry—Identification of vulnerable populations for utilization in emergency/disaster situations.
- Shelter Planning—Planning and training regarding shelter set-up.
- WMD Training—Stakeholders need continued training.
- Flood Recovery Education—Educate community on flood recovery procedures and assistance.
- Evacuation Routes—Maintenance
- Evaluate Quarantine and Isolation Plans
- Mass Dispensing—Planning, training, and exercises.

Project	Hazard														Jurisdiction					Priority		
	Civil Disturbance	Criminal Terrorist	Cyberattack	Dam Failure	Drought	Fire	Flood	Geologic Hazards	Hazardous Materials	Infectious Disease and Pest Infestations	Severe Summer	Severe Winter	Space Weather	Transportation	Burleigh County	Lincoln	Regan	Wilton	Wing	Low	Medium	High
Community Outreach	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
Evaluate County Website	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
All Hazards Radio Outreach	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
GIS Maps - Maintain	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
Multi-Hazard Mitigation Plan - Maintain	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
Three-Day Supply - Promote	X	X	X								X	X			X	X	X	X	X		X	
Lincoln City Hall - New Construction	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X					X	
Lincoln City Hall - Backup power	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X						X
Lincoln Public Works - Facility backup power	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X					X	
Lincoln Public Works - Pump station backup power (66th St/Northgate Dr)	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X					X	
Lincoln Public Works - Pump station backup power (52nd St/S of Eckleson Rd)	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X					X	
Lincoln (Apple Creek Mobile Home Community): Sewer Lines	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X					X	
Wilton City Hall - Backup power	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X			X	
Wilton City Hall - Integrated phone system	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X		X		
Wilton City Hall - Mapping	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X				X
Wilton Water Tower - Backup power	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X			X	
Wing Fire/City Hall - Wireless booster	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X			X
Wing Fire Dept/City Hall - Backup power	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X			X
Wing Water Tower - Backup power	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X			X
Wing Wells (2) - Backup power	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X			X
Wing Lift Stations (2) - Backup power	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X			X
Wing Public Works - Insulate and heat	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X		X	
Report Suspicious Activity	X	X	X												X	X	X	X	X		X	
Dam Safety Information - Outreach				X											X	X	X	X	X		X	
National Flood Insurance Program - Public Participation				X			X								X	X	X	X	X		X	
National Flood Insurance Program - Community Rating System				X			X								X						X	
Apple Creek Industrial Park Levee				X			X								X						X	
McDowell Dam Downstream re-zoning				X			X								X					X		
Online Inundation Mapping - Maintain				X			X								X	X					X	
National Flood Insurance Program - Jurisdiction Compliance				X			X								X	X		X	X		X	
Lincoln - McDougall Dr/Santee Rd culverts				X			X									X						X
Lincoln - McDougall Dr drain tile				X			X									X						X
National Flood Insurance Program - Program Participation				X			X										X			X		
Drought Awareness - Outreach					X										X	X	X	X	X		X	
Water and Soil Conservation - Outreach					X										X	X	X	X	X		X	
Fire Index/Drought Conditions - Outreach					X	X									X	X	X	X	X		X	
Fire Lines						X									X	X	X	X	X	X		
Fuel Reduction						X									X	X	X	X	X	X		
Community Wildfire Protection Plan						X									X	X	X	X	X	X		

Project	Hazard														Jurisdiction					Priority		
	Civil Disturbance	Criminal Terrorist	Cyberattack	Dam Failure	Drought	Fire	Flood	Geologic Hazards	Hazardous Materials	Infectious Disease and Pest Infestations	Severe Summer	Severe Winter	Space Weather	Transportation	Burleigh County	Lincoln	Regan	Wilton	Wing	Low	Medium	High
Community Wildfire Protection Plan						X									X	X	X	X	X	X		
Defensible Space						X									X	X	X	X	X	X		
Missouri River Bottoms Access						X									X					X		
Defensible Space – Regan						X											X			X		
Defensible Space – Wilton						X												X		X		
Wing Fire Hall - Addition						X													X	X		
NFIP Continured Compliance							X								X	X		X	X		X	
Apple Creek Road (Brian's Slough)				X			X								X					X		
Apple Creek Road Grade Raise				X			X								X					X		
Culvert Cleaning							X									X					X	
Landslide Activity - River Road corridor study								X							X						X	
Landslide Activity - Missouri, Apple Creek								X							X			X		X		
Radon Awareness - Outreach								X							X	X	X	X	X		X	
Hazmat Awareness - Outreach									X						X	X	X	X	X		X	
Communicable Disease - Outreach		X								X					X	X	X	X	X		X	
Immunizations/Vaccinations		X								X					X	X	X	X	X		X	
Surveillance - Monitoring Trends		X								X					X	X	X	X	X		X	
Monitoring - Case Management		X								X					X	X	X	X	X		X	
Severe Summer Weather Awareness - Skywarn											X				X	X	X	X	X		X	
Living Snow Fences											X	X			X	X	X	X	X		X	
Cut Trees/Limbs											X	X			X	X	X	X	X	X		
Severe Winter Weather Awareness Outreach												X			X	X	X	X	X		X	
Clear Roadside Trees												X			X	X	X	X	X	X		
Snow Fencing												X			X					X		
Snow Fencing												X						X		X		
Living Snow Fences											X	X									X	
Snow Fencing												X							X	X		
Space Weather - Outreach													X		X	X	X	X	X	X		
Mass Casualty Planning	X	X	X											X	X	X	X	X	X		X	

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Burleigh County, All Cities	All	Community Outreach: Timely, informational campaigns to inform and educate the public on hazards and emergency preparedness.	Maintain public education through workshops, training, and/or newspaper, website, and social media.	**Burleigh Emergency Manager** Fire Districts Bismarck/Burleigh Public Health Dir. Burleigh Sheriff's Office Lincoln Police Department	$5,000	Burleigh Emergency Management Budget Hazard Mitigation Grant Program	Annually	2003 and Ongoing	Medium
Burleigh County, All Cities	All	Evaluate County Website: Improve to serve as central repository for information gathering and dissemination.	Accessibility Yearly Scan	**Burleigh Emergency Manager**	$2,500	Burleigh Emergency Management Budget	Yearly	2025 and Ongoing	Low
Burleigh County, All Cities	All	All Hazards Radio: Promote the purchase and use of an all-hazards radio	Coordinate with ongoing campaigns for Severe Summer Weather, Severe Winter Weather, and National Preparedness Month.	**Burleigh Emergency Manager**	$500	Burleigh County Emergency Management Budget	Annually	2003 and Ongoing	Medium
Burleigh County, All Cities	All	GIS Maps: Maintain Addressing, City Maps, Floodplains, Key Facilities, aerial photos.	Continue to staff a GIS person within Burleigh County	**Burleigh Highway Department - GIS Analyst**	$100,000	Burleigh Highway Dept Budget	1-3 Years	2010 and Ongoing	Medium
Burleigh County, All Cities	All	MHMP: Maintain plan information and update every five years.	• Maintain updates with staff. • Contract the 5-year update.	**Burleigh Emergency Manager**	$1,000	Burleigh Emergency Management Budget Hazard Mitigation Grant Program	3-5 Years	2003 and Ongoing	Medium
Burleigh County, All Cities	All	Three-Day Supply: Promote community and individual preparedness for an event where assistance may not be readily available.	Campaign to promote 3-day supply for each person	**Burleigh Emergency Manager** Bismarck/Burleigh Public Health Dir. American Red Cross Disaster Program Manager	Staff Time	Burleigh Emergency Management Budget	Annually	2014 and Ongoing	Medium
Lincoln	All	City Hall: New construction at city center (EOC, Polling Site, Commission Meetings, Training). Existing building would be retained by the Police Department.	Campaign and design to show need and cost	**Lincoln Commission** Lincoln Police Dept	TBD (in discussion phase)	Wing Sales Tax Wing General Fund Grants and Loans	2-3 Years	2025 and Ongoing	Medium
Lincoln	All	Lincoln City Hall: Backup Power Source	Lincoln City Hall tenants include administration and the Lincoln Police Department. The facility also serves as an Emergency Operations Center and contains no backup power. • Generator (natural gas) • Battery	**Lincoln Commission** Burleigh Emergency Manager	$50,000	Lincoln General Fund Hazard Mitigation Grant Program	1-2 Years	2025 Grant Award 2020 and Ongoing	High
Lincoln	All	Lincoln Public Works: Backup Power Source	Lincoln Public Works was constructed in 2019 and contains no back up power. • Generator (natural gas) • Battery	**Lincoln Public Works** Lincoln City Commission Burleigh Emergency Manager	$40,000	Lincoln General Fund Hazard Mitigation Grant Program	1-2 Years	2025 Grant Award 2020 and Ongoing	High
Lincoln	All	Lincoln Public Works: Pump Station backup power (66th St/Northgate Dr)	Pump station brings fresh water to community and contains no backup power source. •Generator	**Lincoln Public Works** Lincoln City Commission Burleigh Emergency Manager	$25,000	Lincoln General Fund Hazard Mitigation Grant Program ND Dept of Water Resources	1-3 Years	2020 and Ongoing	Medium

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Lincoln	All	Lincoln Public Works: Pump Station backup power (52nd St/S of Eckleson Rd)	Pump station brings fresh water to community and contains no backup power source. •Generator	**Lincoln Public Works** Lincoln City Commission Burleigh Emergency Manager	$25,000	Lincoln General Fund Hazard Mitigation Grant Program ND Dept of Water Resources	1-3 Years	2020 and Ongoing	Medium
Lincoln	All	Lincoln (Apple Creek Mobile Home Community): Sewer Lines	Current 4" lines need to be 6"-8" line to feed to the City of Lincoln and meet code.	**Lincoln Public Works** Lincoln City Commission	TBD	Lincoln General Fund ND Dept of Water Resources	1-3 Years	2020 and Ongoing	Medium
Wilton	All	Wilton City Hall (EOC): Backup Power Source	Wilton City Hall is utilized as an Emergency Operations Center and has no backup power. • Generator • Battery	**Wilton Commission** Burleigh Emergency Manager	$50,000	Wilton General Fund Hazard Mitigation Grant Program	1-3 Years	2025 Applied for Grant 2020 and Ongoing	Medium
Wilton	All	Wilton City Hall (EOC): Integrated phone system	Wilton City Hall is utilized as an Emergency Operations Center and currently has three phone lines that are not integrated. • Add additional lines and integrate system • Utilize portable phones	**Wilton Commission** Burleigh Emergency Manager	$5,000	Wilton General Fund Hazard Mitigation Grant Program	1-3 Years	2020 and Ongoing	Medium
Wilton	All	Wilton City Hall (EOC): Mapping (digital and print)	Wilton City Hall is also utilized as an Emergency Operations Center and has no updated maps, including aerial, for planning and response. • Contract for a digital map and printed maps	**Wilton Commission** Burleigh Emergency Manager	$2,000	Wilton General Fund Hazard Mitigation Grant Program	1-3 Years	2020 and Ongoing	Medium
Wilton	All	Wilton Water Tower: Backup Power Source (gas generator)	The City of Wilton has one water tower with no backup power. • Generator • Battery	**Wilton Commission** Burleigh Emergency Manager	$5,000-$10,000	Wilton General Fund Hazard Mitigation Grant Program	1-3 Years	2020 and Ongoing	Medium
Wing	All	City of Wing Fire Department/City Hall (EOC): Wireless booster	The Fire Department and City Hall are co-located, and the facility also serves as the Emergency Operations Center. A recent emergency highlighted the need for a wireless booster to communicate with entities outside of the City. Wireless reception is poor (except for AT&T).	**Wing Commission** Burleigh Emergency Manager	$3,000-$5,000	Wing General Fund Homeland Security Grant Hazard Mitigation Grant Program	1-3 Years	2020 and Ongoing	High
Wing	All	City of Wing Fire Department/City Hall: Backup Power Source	The Fire Department and City Hall are co-located, and the facility also serves as the Emergency Operations Center. Generator hookup was previously installed on the north side of the building. Generator could also power the chemical house on the west side of the facility. • Generator 10 kW • Battery	**Wing Commission** Burleigh Emergency Manager	$30,000	Wing General Fund Hazard Mitigation Grant Program	1-3 Years	2020 and Ongoing	High

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Wing	All	City of Wing Water Tower: Backup Power Source	The City of Wing has one water tower with no backup power. • Generator (fixed outside) • Battery	**Wing Commission** Burleigh Emergency Manager	$30,000-$50,000	Wing General Fund Hazard Mitigation Grant Program ND Dept of Water Resources	1-3 Years	2019 and Ongoing	High
Wing	All	City of Wing wells (2): Backup Power Source	The City of Wing has two wells with no backup power. One generator would backup both wells. • Generator (10 kW fixed outside) • Battery	**Wing Commission** Burleigh Emergency Manager	$30,000-$50,000	Wing General Fund Hazard Mitigation Grant Program ND Dept of Water Resources	1-3 Years	2019 and Ongoing	High
Wing	All	City of Wing Lift Stations (2): Backup Power Source	The City of Wing has one two lift stations with no backup power. Without power, it will back up into the City. • Generator (fixed outside) • Battery	**Wing Commission** Burleigh Emergency Manager	$10,000-$15,000	Wing General Fund Hazard Mitigation Grant Program ND Dept of Water Resources	1-3 Years	2020 and Ongoing	High
Wing	All	City of Wing Public Works Building: Insulate and Heat	The City of Wing Public Works building is a Morton metal pole frame building with a dirt floor. • Insulate (spray foam) and heat (radiant heat)	**Wing Commission** Burleigh Emergency Manager	$75,000	Wing General Fund Hazard Mitigation Grant Program	1-3 Years	2020 and Ongoing	Medium
Burleigh County, All Cities	Civil Disturbance Criminal Terrorist Cyberattack	Report Suspicious Activity: Urge residents to report suspicious activity of any kind to law enforcement.	Continue to work with the ND State and Local Intelligence Center	**Burleigh Sheriff's Office** **Lincoln Police** Burleigh Emergency Manager	Free	Free	Annually	2010 and Ongoing	Medium
Burleigh County, All Cities	Dam Failure	Dam Safety Information	Provide information on dam safety including private owners and low-head dams	**Burleigh Emergency Manager** **Burleigh Water Resource District**	Staff Time	Free	Annually (Dam Safety Week)	2026 and Ongoing	Medium
Burleigh County, All Cities	Dam Failure Flood	National Flood Insurance Program (public): Promote public participation in the program.	Continue to inform public regarding flood insurance.	Lincoln Commission Wilton Commission Wing Commission **Burleigh Floodplain Administrator** Burleigh Commission **Burleigh Emergency Manager** **Burleigh Water Resource District**	$500	Burleigh Emergency Management Budget Burleigh Building/Planning/Zoning Budget Burleigh Water Resource District Budget	Ongoing	2003 and Ongoing	Medium

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Burleigh County	Dam Failure Flood	National Flood Insurance Program: Consider participation in the Community Rating System	Participate in the Community Rating System	Burleigh Commission Burleigh Emergency Manager **Burleigh Floodplain Manager**	$20,000 Staff Time	Burleigh Building/Planning/Zoning Budget Burleigh Water Resource District Budget	Ongoing	2024 Started Process	Medium
Burleigh County	Dam Failure Flood	Apple Creek Industrial Park Levee Assessment: The existing Apple Creek Industrial Park Levee has been de-accredited by FEMA resulting in a significant hindrance to development within this subdivision.	Complete assessment of current levee condition and identify actions required to certify the levee under the NFIP. Scope of work and budget have been prepared. Local landowners have met to discuss the need to provide a bond for local share of assessment. ND State Water Commission has provided a cost share agreement to the WRD, and they have signed the agreement.	**Burleigh Water Resource District**	$2,000,000	ND Department of Water Resources Local Assessments	WRD waiting for landowners to provide petition and a bond for completing this assessment.	2013 and Ongoing	Low
Burleigh County	Dam Failure Flood	McDowell Dam Downstream Re-Zoning: McDowell Dam was designed and constructed as a medium hazard dam. Downstream development could raise the hazard classification to 'high' which could necessitate extensive modifications and public expense in order to comply with heightened dam design standards.	One alternative would be to create a special zoning district downstream of the dam within the breach zone to prevent additional development within this zone and reduce the likelihood of the dam being reclassified as high hazard.	**Burleigh Water Resource District**	TBD (in discussion phase)	Water Resource District Budget	TBD. The State Water Commission is completing an updated assessment of the facility and downstream reach which may dictate a timeframe and an approach.	2015 and Ongoing	Low
Burleigh County, Lincoln	Dam Failure Flood	Online Inundation Mapping Program (Missouri River Flood and Apple Creek)	Online mapping program for community to see flooding impacts (update as needed)	**Burleigh Highway Dept - GIS** Burleigh Emergency Manager Burleigh Water Resource District	Staff Time	Burleigh Highway Department Budget Hazard Mitigation Grant Program	Ongoing	2009 and Ongoing	Medium
Lincoln	Dam Failure Flood	McDougall Dr/Santee Rd: Undersized culverts	Santee Rd is a main road. Repetitive water inundation, water runs over and floods area. • Replace 4 undersized culverts • Drain tile	**Lincoln Public Works** Lincoln Commission Burleigh Emergency Manager	TBD (in discussion phase)	City of ND Department of Water Resources	1-2 Years	2020 and Ongoing	High
Lincoln	Dam Failure Flood	McDougall Dr (Santee Rd to Belk Dr): Drain tile	Repetitive water inundation •Drain tile	**Lincoln Public Works** Lincoln Commission Burleigh Emergency Manager	TBD (in discussion phase)	City of ND Department of Water Resources	1-2 Years	2020 and Ongoing	High

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Regan	Dam Failure Flood	National Flood Insurance Program: Promote participation in the program.	Continue to foster with Regan.	Regan Commission **Burleigh Emergency Manager** Burleigh Floodplain Administrator	$500	Burleigh Building/Planning/Zoning Budget Burleigh Water Resource District Budget	Ongoing	2003 and Ongoing	Low
Burleigh County, All Cities	Drought	Drought Awareness: Inform public of critical water supplies and water bans during drought.	• Publish information via flyers, newspaper, website, and social media. • Encourage installation of water-saving devices.	Lincoln Commission Regan Commission Wilton Commission Wing Commission Burleigh Commission **Burleigh Emergency Manager** **Burleigh Extension Service**	$500	Burleigh Emergency Management Budget Lincoln General Fund Budget Wilton General Fund Budget Wing General Fund Budget	As Needed	2003 and Ongoing	Medium
Burleigh County, All Cities	Drought	Water and Soil Conservation: Encourage the agricultural community to implement water and soil conservation practices	Continue to inform agricultural participants on the value of crops and livestock preservation during drought.	**Burleigh Extension Service**	$,1000	Burleigh Emergency Management Budget Burleigh Extension Budget Lincoln General Fund Budget Wilton General Fund Budget Wing General Fund Budget	Ongoing	2003 and Ongoing	Medium
Burleigh County, All Cities	Drought Fire	Fire Index/Drought Conditions: Inform community of fire danger index, burning regulations, and burn restrictions (when instituted)	Continue to provide information via newspaper, website, and social media	**Burleigh Emergency Manager** Bismarck Rural Fire Sterling Rural Fire Wilton Rural Fire Wing Rural Fire Burleigh Sheriff's Office Lincoln Police Dept	$100	Burleigh Emergency Management Budget	As Needed	2003 and Ongoing	Medium
Burleigh County, All Cities	Fire	Fire Lines: Promote the utilization of fire lines into heavily wooded areas and or inaccessible areas.	Promote firewise safety practices.	**Bismarck Rural Fire** **Sterling Rural Fire** **Wilton Rural Fire** **Wing Rural Fire**	$5,000	Bismarck Rural Fire Department Budget Sterling Rural Fire Department Budget Wilton Rural Fire Department Budget Wing Rural Fire Department Budget ND Forest Service Grant	Annually	2015 and Ongoing	Low
Burleigh County, All Cities	Fire	Fuel Reduction: Continue fuel reduction on the USFWS District, particularly the WUI; the USFWS performs prescription burning on approximately 1000 acres per year.	Prescription burns and education on haying and grazing to reduce fuels.	**Bismarck Rural Fire** **Sterling Rural Fire** **Wilton Rural Fire** **Wing Rural Fire** **ND Forest Service** **ND Game and Fish** **US Fish and Wildlife**	$5,000-$10,000	Bismarck Rural Fire Department Budget Sterling Rural Fire Department Budget Wilton Rural Fire Department Budget Wing Rural Fire Department Budget ND Forest Service Grant	Annually	2010 and Ongoing	Low

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Burleigh County, All Cities	Fire	Community Wildfire Protection Plan: Review and Update.	Continue to review and update the current CWPP.	**Burleigh Emergency Manager** Bismarck Rural Fire Sterling Rural Fire Wilton Rural Fire Wing Rural Fire	Staff Time	Staff Time	Annually	2003 and Ongoing	Low
Burleigh County, All Cities	Fire	Defensible Space: Promote the use of defensible space to help protect structures.	Promote firewise safety practices.	**Bismarck Rural Fire** **Sterling Rural Fire** **Wilton Rural Fire** **Wing Rural Fire**	$1,000	Burleigh Emergency Management Budget	Annually	2010 and Ongoing	Low
Burleigh County	Fire	Accessibility to Missouri River Bottoms south of Bismarck.	Fuel reduction and fire breaks in strategic areas, access roads.	**Bismarck Rural Fire** **Sterling Rural Fire** **Wilton Rural Fire** **Wing Rural Fire** **ND Forest Service** **ND Game and Fish**	Staff Time	Bismarck Rural Fire Department Budget ND Forest Service Grant	Annually	2010 and Ongoing	Low
Regan	Fire	Defensible Space: Evaluate and/or create defensible space around critical infrastructure to include removal of debris accumulation.	Promote firewise safety practices. Evaluate and/or create defensible space around critical infrastructure to include removal of debris accumulation.	**Wilton Rural Fire**	Staff Time	Volunteer	Annually	2015 and Ongoing	Low
Wilton	Fire	Defensible Space: Evaluate and/or create defensible space around critical infrastructure to include removal of debris accumulation.	Promote firewise safety practices. Evaluate and/or create defensible space around critical infrastructure to include removal of debris accumulation. • Railways • Lagoon • North side of City	**Wilton Rural Fire**	Staff Time	Volunteer	Annually	2015 and Ongoing	Low
Wing	Fire	Addition to Fire Hall	Current fire hall utilized for City Commission Meeting, fire vehicles and equipment, and one quick response unit. Need to upgrade and provide appropriate space.	**Wing Commission** Wing Rural Fire	TBD (in discussion phase)	Wing General Fund Possible loans (SBA)	Annually	2025	Low

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Burleigh County, Lincoln, Wilton, Wing	Flood	National Flood Insurance Program (jurisdictions): Continue compliance in the program.	Review floodplain ordinances	**Lincoln Commission** **Wilton Commission** **Wing Commission** **Burleigh Floodplain Administrator** Burleigh Commission Burleigh Emergency Manager Burleigh Water Resource District	$1,000	Burleigh Emergency Management Budget Burleigh Building/Planning/Zoning Budget Burleigh Water Resource District Budget Lincoln General Fund Budget Wilton General Fund Budget Wing General Fund Budget	Ongoing	2003 and Ongoing	Medium
Burleigh County	Flood	Apple Creek Road/106th St SE (Brian's Slough)	Spring runoff inundates road. • Culvert • Grade Raise • Culvert and Grade Raise	**Burleigh Highway Dept** Burleigh Water Resource District	$50,000	Burleigh Highway Department Budget Burleigh Water Resource District Budget	TBD	2020 and Ongoing	Low
Burleigh County	Flood	Apple Creek Road: Grade raise to minimize yearly flooding.	Walls Residence (west is low spot where channels are). • Install box culvert – need to address downstream flow. Technical assistance from Water Management District concerning overall hydraulic benefit. • Close road during inundation	**Burleigh Highway Dept** Burleigh Water Resource District	$2,000,000	Burleigh Highway Department Budget Burleigh Water Resource District Budget	2030	2003 and Ongoing	Low
Lincoln	Flood	Culvert Cleaning	Ensure culverts are free of debris.	**Lincoln Public Works**	$1,200	Lincoln Public Works Budget	Annually	2015 and Ongoing	Medium
Burleigh County	Geologic Hazards	Landslide Activity: River Road corridor study	Portions of embankment along River Road are subject to sloping/landslide. Monthly drone monitoring	**Burleigh Highway Dept**	TBD (based on activity)	Burleigh Highway Department Budget	Annually	2020 and Ongoing	Medium
Burleigh County	Geologic Hazards	Landslide Activity: Monitor embankments along Missouri River and Apple Creek for potential landslide activity.	Establish and maintain a monitoring practice. Monthly drone monitoring	**Burleigh Highway Dept** **Burleigh Water Resource District**	TBD (based on activity)	Burleigh Highway Department Budget Burleigh Water Resource District Budget	Annually	2015 and Ongoing	Low
Burleigh County, All Cities	Geologic Hazards	Radon Awareness	Social Media Campaign (Radon Kits Available)	**Burleigh Emergency Manager**	Staff Time	Bismarck/Burleigh Public Health ND Department of Environmental Quality	Annually	2026 and Ongoing	Medium
Burleigh County, All Cities	Hazardous Materials	Hazmat Awareness: Community should understand the hazards and protective measures.	Maintain and update the Shelter-in-Place brochure as necessary	**Burleigh Emergency Manager** Bismarck Rural Fire Sterling Rural Fire Wilton Rural Fire Wing Rural Fire Burleigh Sheriff's Office Lincoln Police Dept	$500	Burleigh Local Emergency Planning Committee Budget	Annually	2003 and Ongoing	Medium

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Burleigh County, All Cities	Infectious Disease and Pest Infestations	Communicable Disease Outreach: Make public aware of the dangers of communicable disease to people, crops, and livestock	Advertising campaign to include current diseases in the area (if applicable) and promote inoculations	**Bismarck/Burleigh Public Health Dir.** **Burleigh Extension Service**	$1,000	Bismarck/Burleigh Public Health Budget Burleigh Extension Budget NDHHS Grants	Annually	2003 and Ongoing	Medium
Burleigh County, All Cities	Infectious Disease and Pest Infestations	Immunization/Vaccinations	Immunization clinics.	**Bismarck/Burleigh Public Health Dir.**	Staff Time	Bismarck/Burleigh Public Health Budget NDHHS Grants	Annually	2014 and Ongoing	Medium
Burleigh County, All Cities	Infectious Disease and Pest Infestations	Surveillance: Monitoring trends in clinics, hospitals, and emergency rooms.	Continue surveillance program.	**Bismarck/Burleigh Public Health Dir.** ND Health and Human Services	Staff Time	Bismarck/Burleigh Public Health Budget NDHHS Grants	Annually	2014 and Ongoing	Medium
Burleigh County, All Cities	Infectious Disease and Pest Infestations	Monitoring: Case management of communicable diseases.	Continue monitoring program.	**Bismarck/Burleigh Public Health Dir.** ND Health and Human Services	Staff Time	Bismarck/Burleigh Public Health Budget NDHHS Grants	Annually	2014 and Ongoing	Medium
Burleigh County, All Cities	Severe Summer Weather	Severe Summer Weather Awareness: Skywarn Training for awareness and potential storm spotters	Maintain annual training as part of the Severe Summer Weather Awareness Campaign	**Burleigh Emergency Manager**	$500	Burleigh Emergency Management Budget	Annually	2003 and Ongoing	Medium
Burleigh County, All Cities	Severe Summer Weather Severe Winter Weather	Living Snow Fences: Continue to promote living snow fences and shelterbelts to prevent snow drifting and protection from severe summer weather and windstorms.	Continue to work with agricultural community to promote this protective practice.	**Burleigh Extension Service**	$500	Burleigh Extension Budget	Annually	2015 and Ongoing	Medium
Burleigh County, All Cities	Severe Summer Weather Severe Winter Weather	Cut Trees/Limbs: Evaluate trees and foliage around structures and utilities to reduce and potentially eliminate damages from weather events.	Continue to work with community to promote this protective practice.	**Burleigh Extension Service**	$500	Burleigh Extension Budget	Annually	2015 and Ongoing	Low
Burleigh County, All Cities	Severe Winter Weather	Severe Winter Weather Awareness: Prepare community for the hazards of severe winter weather (blizzards, ice storm, windchill, etc)	Maintain annual campaign via newspaper, website, and social media.	**Burleigh Emergency Manager**	$100	Burleigh Emergency Management Budget	Annually	2003 and Ongoing	Medium
Burleigh County, All Cities	Severe Winter Weather	Clear Roadside Trees: Effect snow removal clearing area.	Identify areas and removal process with concentration on major arterials and collector streets.	**Burleigh Highway Dept**	Staff Time	Burleigh Highway Department Budget Lincoln Public Works Budget Wilton Public Works Budget	Annually	2012 and Ongoing	Low
Burleigh County	Severe Winter Weather	Snow Fencing (Ridging): Protection of areas where snow historically "drifts".	Locations: Burleigh County Snow Ridge Locations Map (Attachment 3: Maps)	**Burleigh Highway Dept**	Staff Time	Burleigh Highway Department Budget	Annually or as Needed	2015 and Ongoing	Low
Wilton	Severe Winter Weather	Snow Fencing (Ridging): Protection of areas where snow historically "drifts".	Location: Areas near Highway 83 and north of the City.	**Wilton Public Works**	Staff Time	Wilton Public Works Budget	Annually or as Needed	2020 and Ongoing	Low

Mitigation Projects									
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead and Support Agency(s)/Position(s) Leads in Bold**	**Cost**	**Funding Source**	**Timeframe**	**Progress**	**Priority**
Wing	Severe Summer Weather Severe Winter Weather	Living Snow Fences: Continue to promote living snow fences and shelterbelts to prevent snow drifting and protection from severe summer weather and windstorms.	Locations: Fire hall, basketball slab, near water treatment plant, park	Wing Commission **Wing Public Works** ND Forestry	Staff Time	Wing General Budget Wing Fire Department Budget	As Needed	2025 and Ongoing	Medium
Wing	Severe Winter Weather	Snow Fencing (Ridging): Protection of areas where snow historically "drifts".	Location: Open area near the basketball court off of Mann St, between 1st Av W and 2nd Ave W.	**Wing Public Works**	Staff Time	Wing General Budget Wing Fire Department Budget	Annually or as Needed	2015 and Ongoing	Low
Burleigh County, All Cities	Space Weather	Space Weather: Outreach	Communicate potential risks to community based on forecasts.	**Burleigh Emergency Manager**	Staff Time	Burleigh Emergency Management Budget	As Needed	2019 and Ongoing	Low
Burleigh County, All Cities	Transportation Accident	Mass Casualty Planning: Update plan on a regular basis.	Continue to work with local stakeholders on plan maintenance.	**Burleigh Emergency Manager** Bismarck/Burleigh Public Health Dir. Burleigh Sheriff's Office Lincoln Police Dept	$200	Burleigh Emergency Management Budget Bismarck/Burleigh Public Health Budget	Annually	2003 and Ongoing	Medium

ATTACHMENT 2: MITIGATION PROJECTS COMPLETED

Mitigation Projects Completed (last five years)							
Jurisdiction	**Hazard**	**Description**	**Range of Actions (preferred action shown first if more than one listed)**	**Lead Agency(s)**	**Funding Source**	**Timeframe**	**Progress**
Burleigh County, All Cities	All	Evaluate County Website: Improve to serve as central repository for information gathering and dissemination.	• RFP for new design • Sole source contract through current website host • Develop inhouse	County Commission Emergency Mgt Department Heads	General Fund	1-3 Years	Completed 2023
Burleigh County	Geologic Hazards	University of Mary bank stabilization	Re-grading existing slope for slope reinforcement and seepage control measures to mitigate property loss at the University of Mary Campus. The project will consist of a combination of slope re-grading and solider pile wall with tie-back system.	University of Mary Emergency Mgt	Pre-Disaster Mitigation Grant	2017-2025	Completed 2025
Lincoln	Flood	Water Storage Tank Replacement	Replace existing 549,000-gallon water tank with structural deficiencies with a 1-million-gallon tank	Lincoln City Commission Emergency Mgt Floodplain Administrator	NDDEQ State Revolving Fund Program (loan)	3-5 Years	Completed 2025
Lincoln	All	Lincoln (Apple Creek Mobile Home Community): Water Line Shut-Offs	Water line has no shutoffs	South West Central Water Public Works City Commission	Assessment	1-3 Years	Completed 2025
Lincoln	All	Lincoln Public Works: Lift station has no backup power (Near Cenex Station at 52nd St/Lincoln Rd)	Lift station pumps to the lagoons and contains no backup power source. •Generator	Public Works City Commission Emergency Mgt	General Fund	1-3 Years	Completed 2020
Lincoln	All	Lincoln City Hall: Security	Lincoln City Hall tenants include administration and the Lincoln Police Department. The facility also serves as an Emergency Operations Center and contains minimal security features. •Electronic key fob doors •ID Card Maker	Police Dept City Commission Emergency Mgt	Grant	1-3 Years	Completed 2020
Wilton	All	Wilton Ambulance: Backup Power Source	The City of Wilton has one ambulance garage with no backup power. •Generator •Battery	City of Wilton Emergency Mgt	Grants and General Fund	1-3 Years	Completed 2024

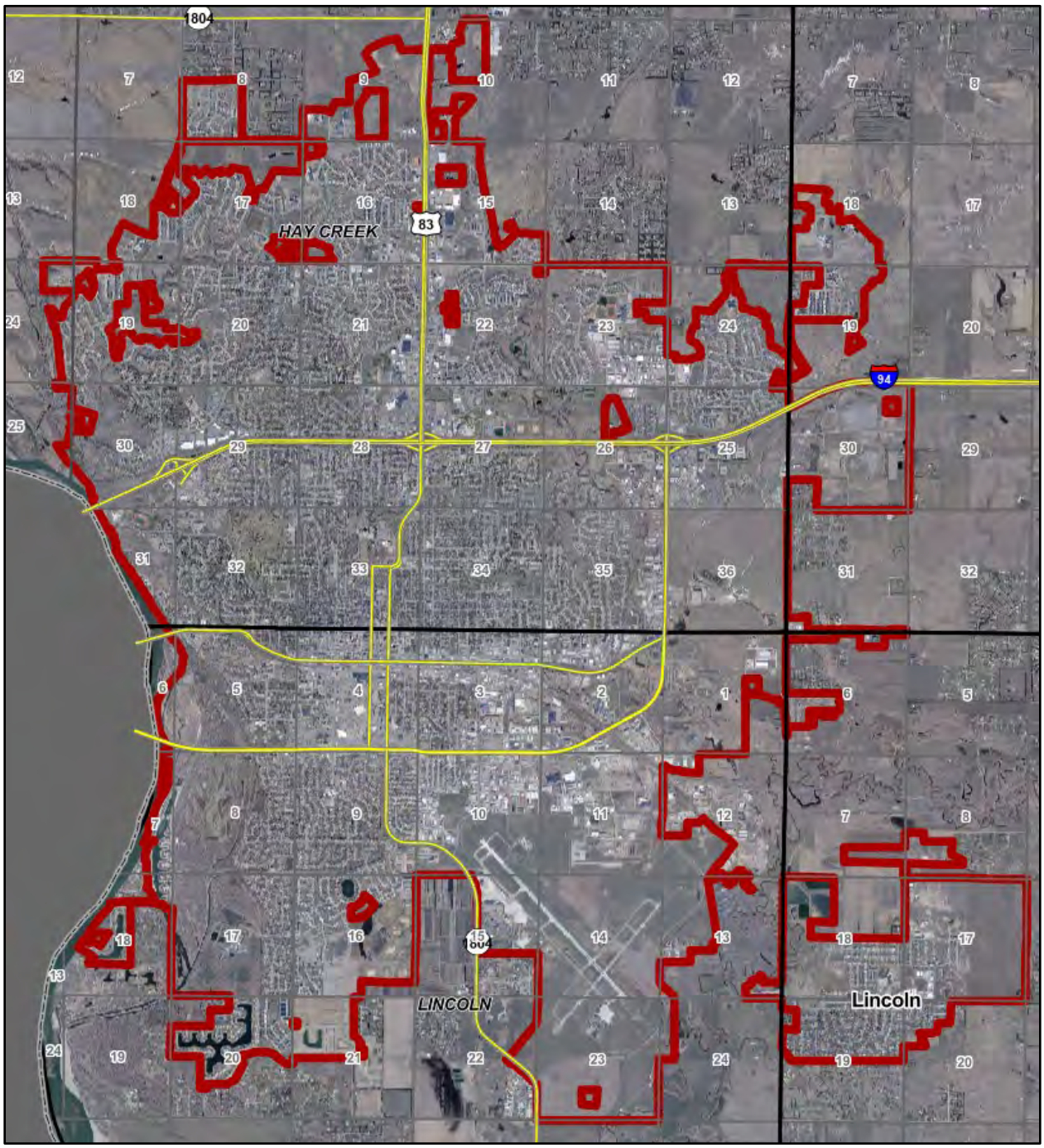
ATTACHMENT 3: MAPS

Burleigh County

Source: Google Maps website

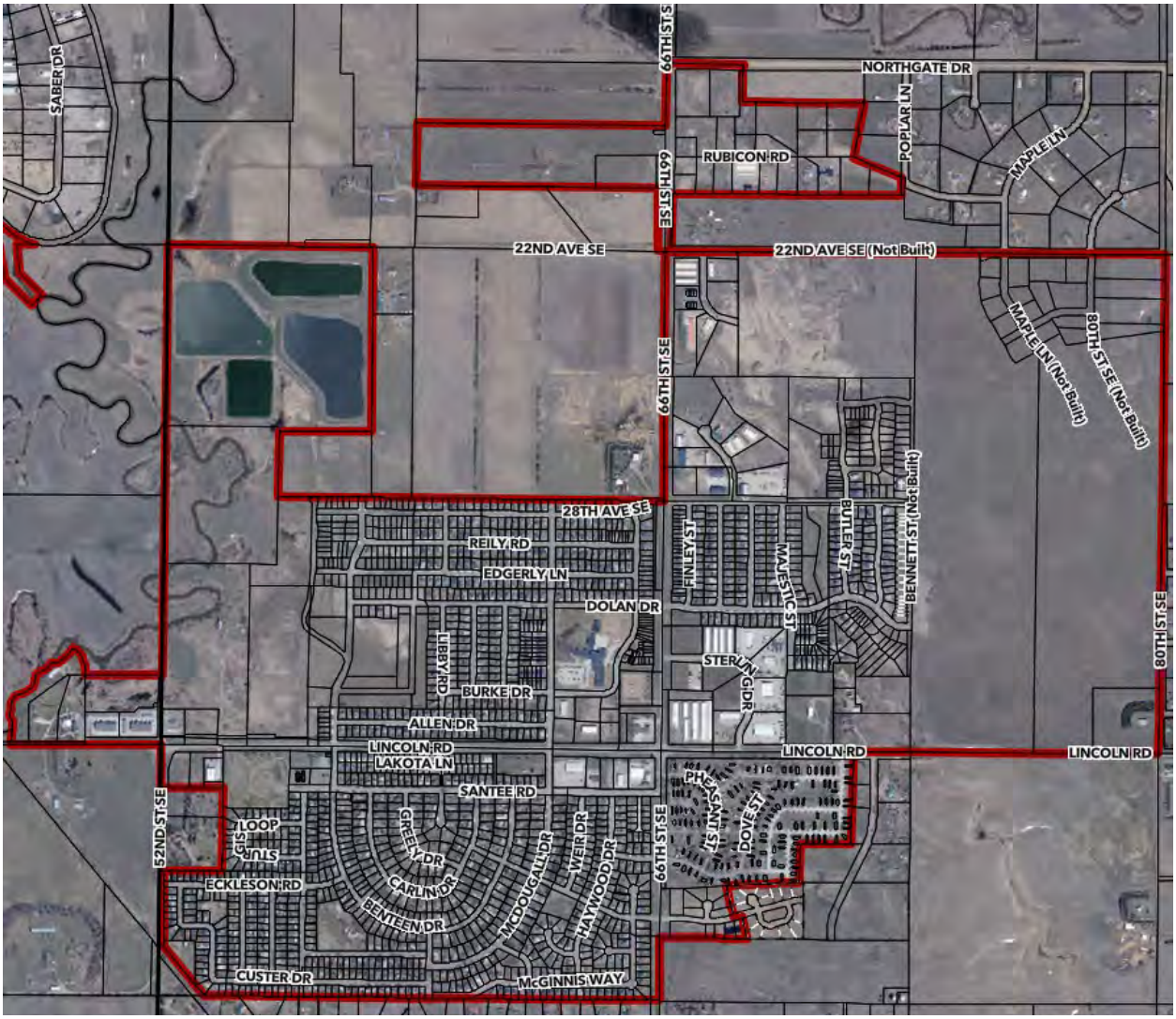
Source: Google Maps website

City of Bismarck



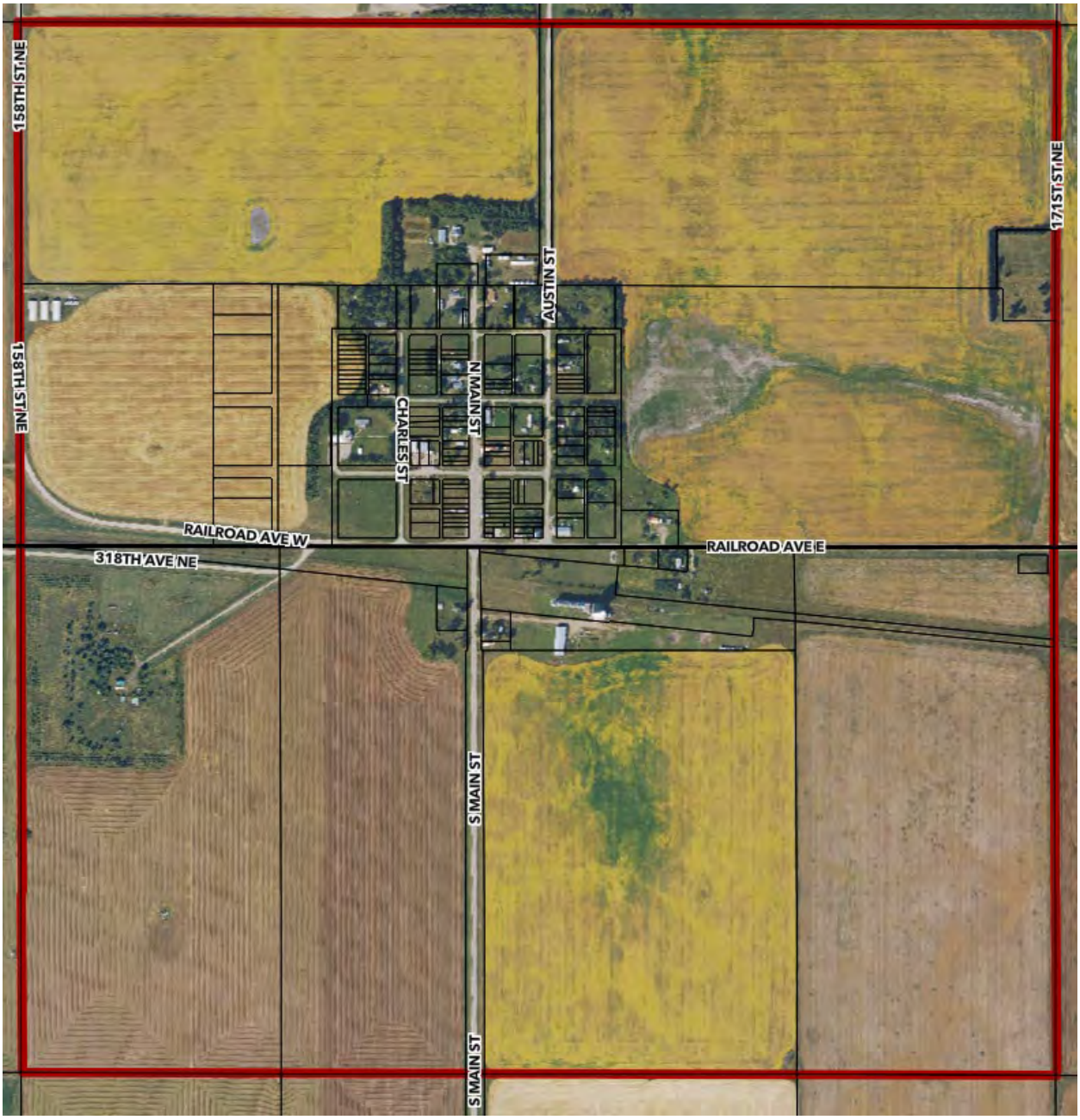
Source: Burleigh County website

City of Lincoln



Source: Burleigh County website

City of Regan

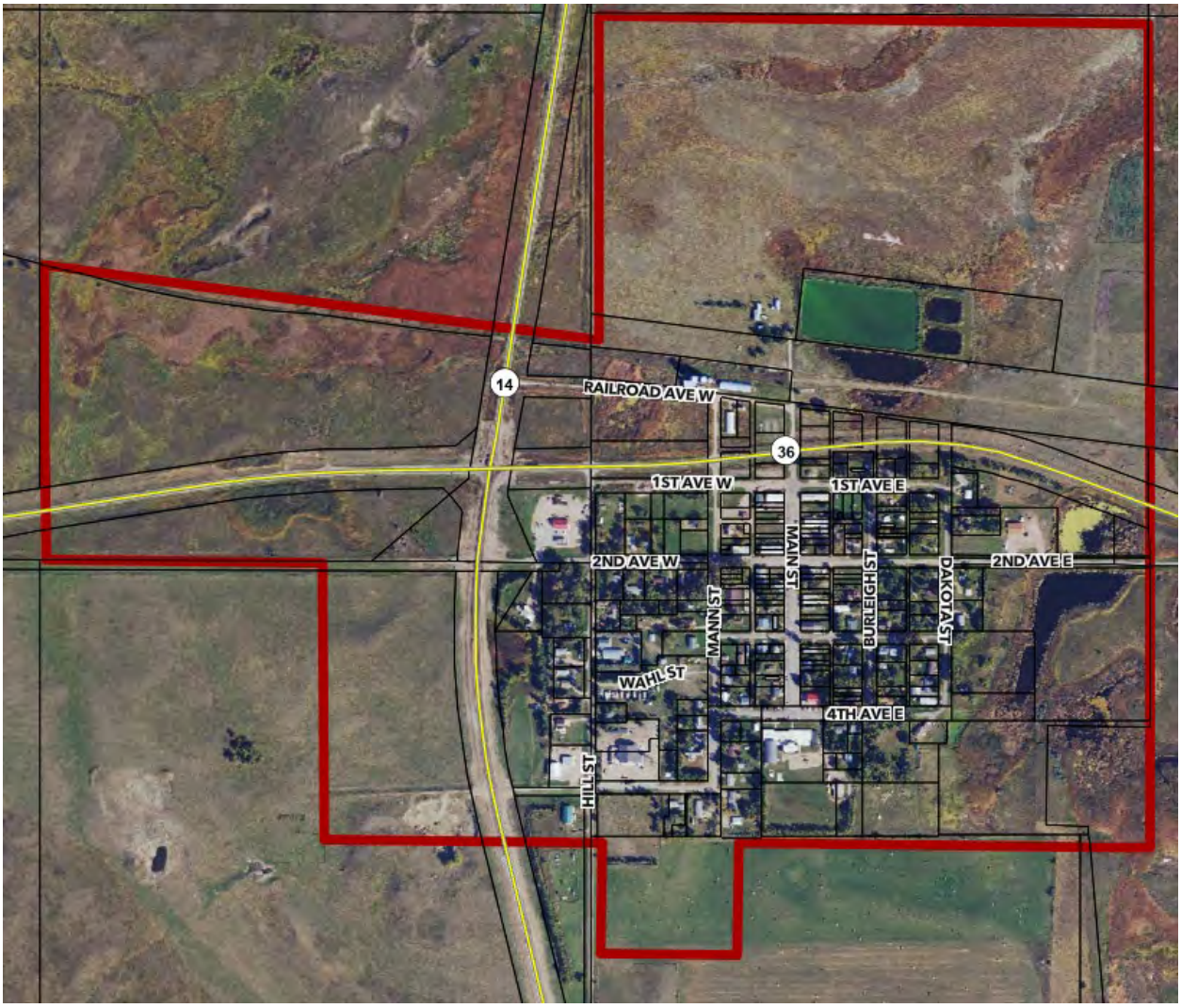


Source: Burleigh County website

City of Wilton

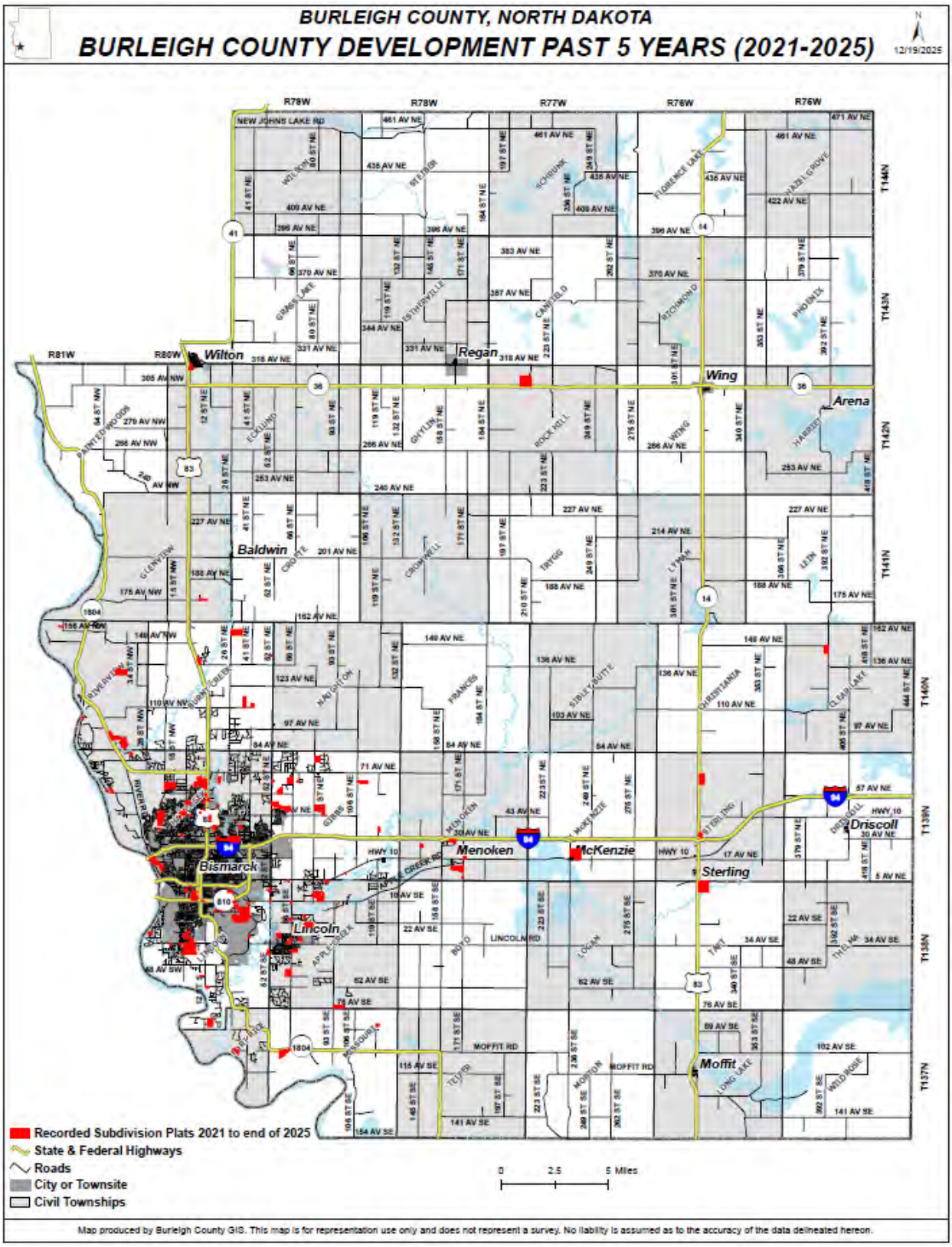
Source: Burleigh County website

City of Wing

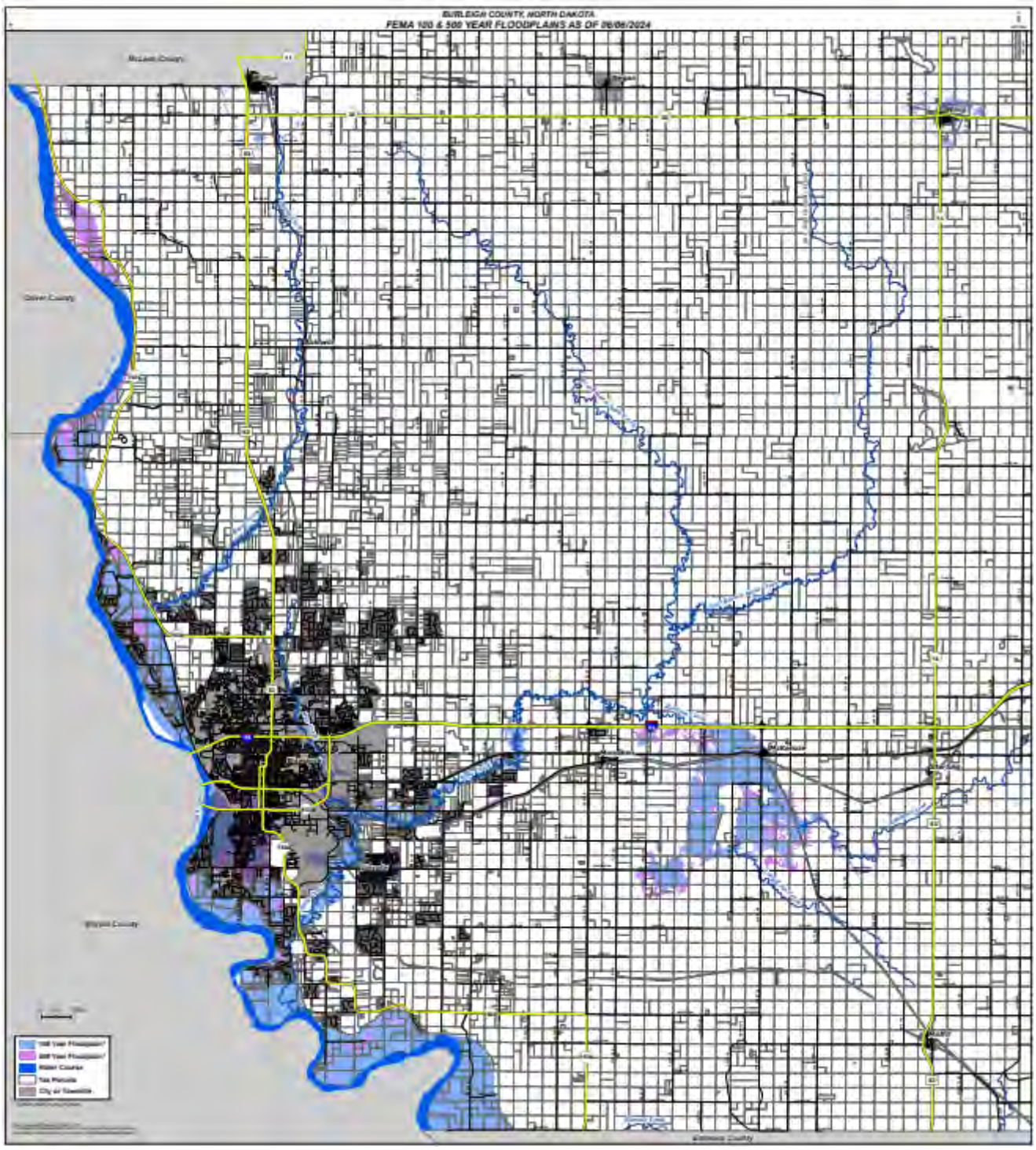


Source: Burleigh County website

Development (2021-2025)

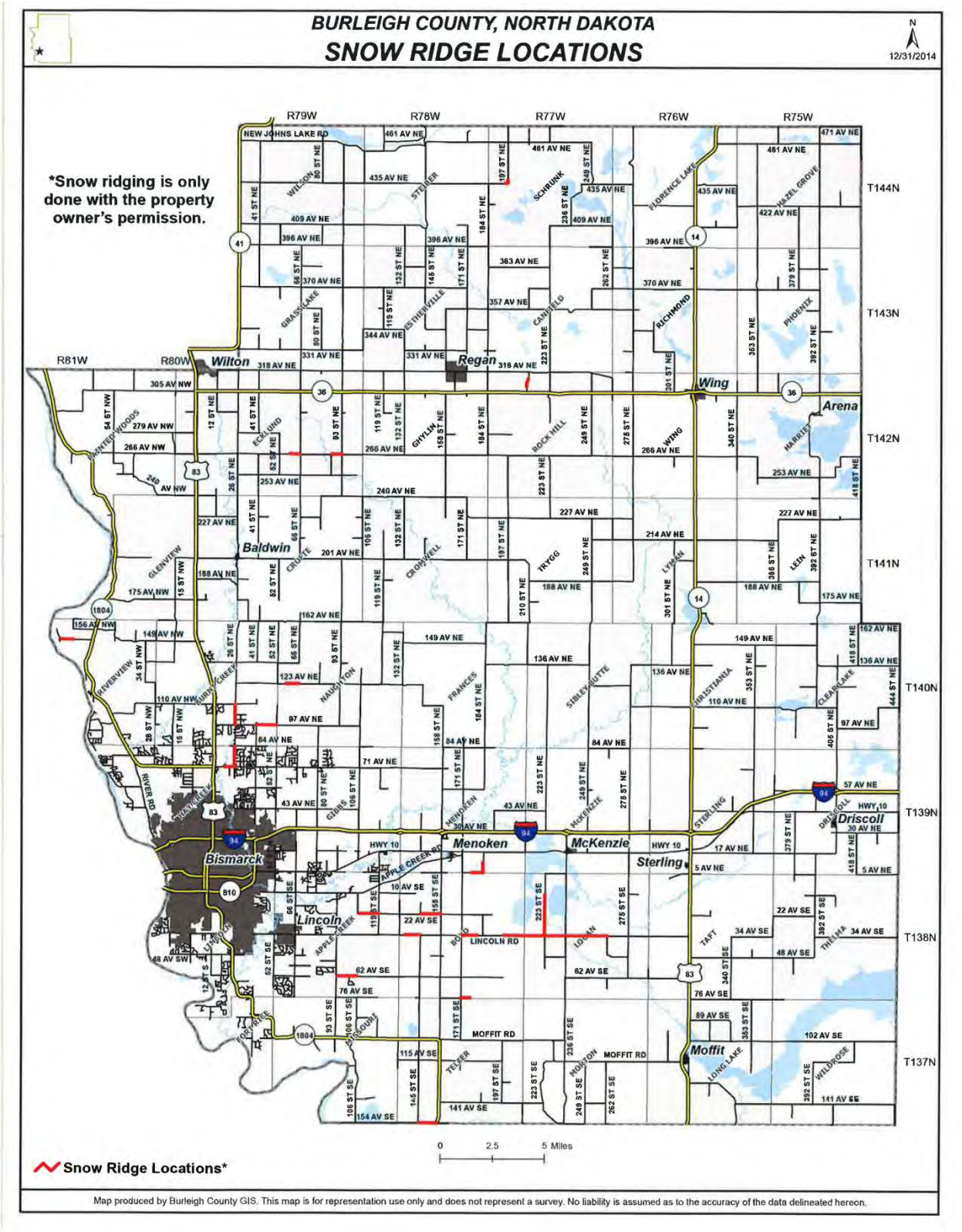


100- and 500-Year Floodplain Map



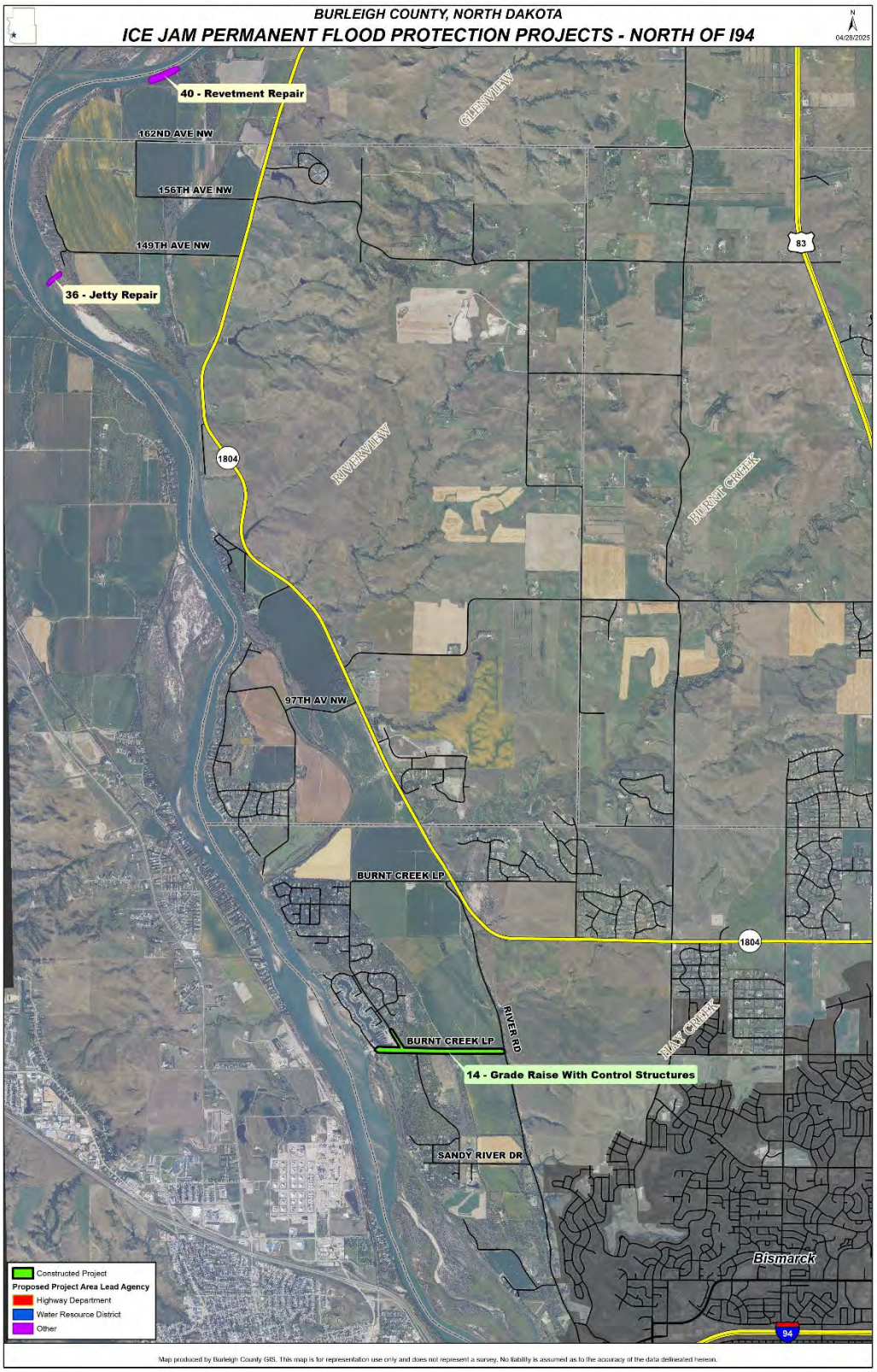
Source: Burleigh County website

Burleigh County Snow Ridge Locations



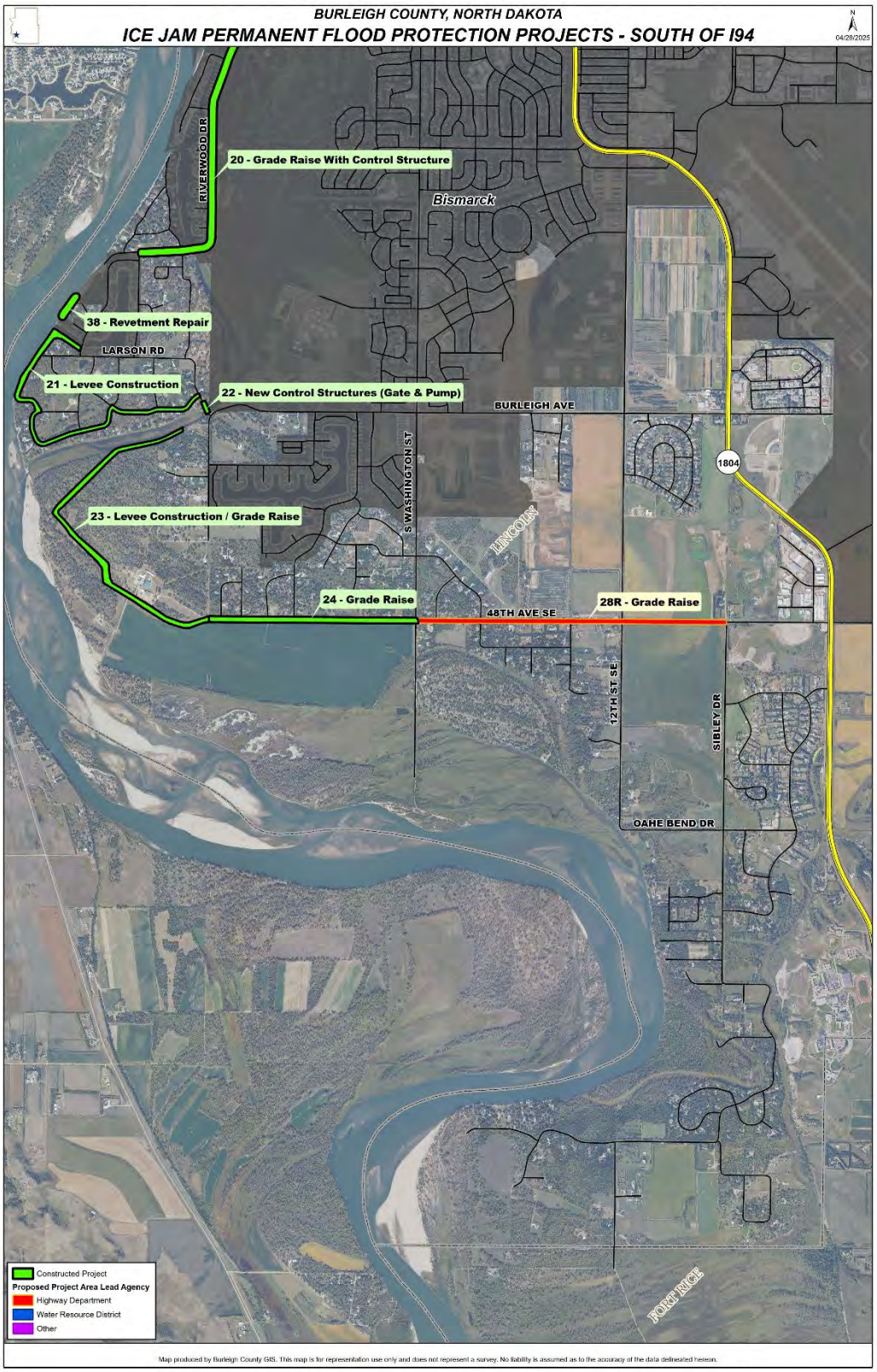
Source: Burleigh County GIS

Ice Jam Permanent Flood Protection Projects – North of Interstate 94



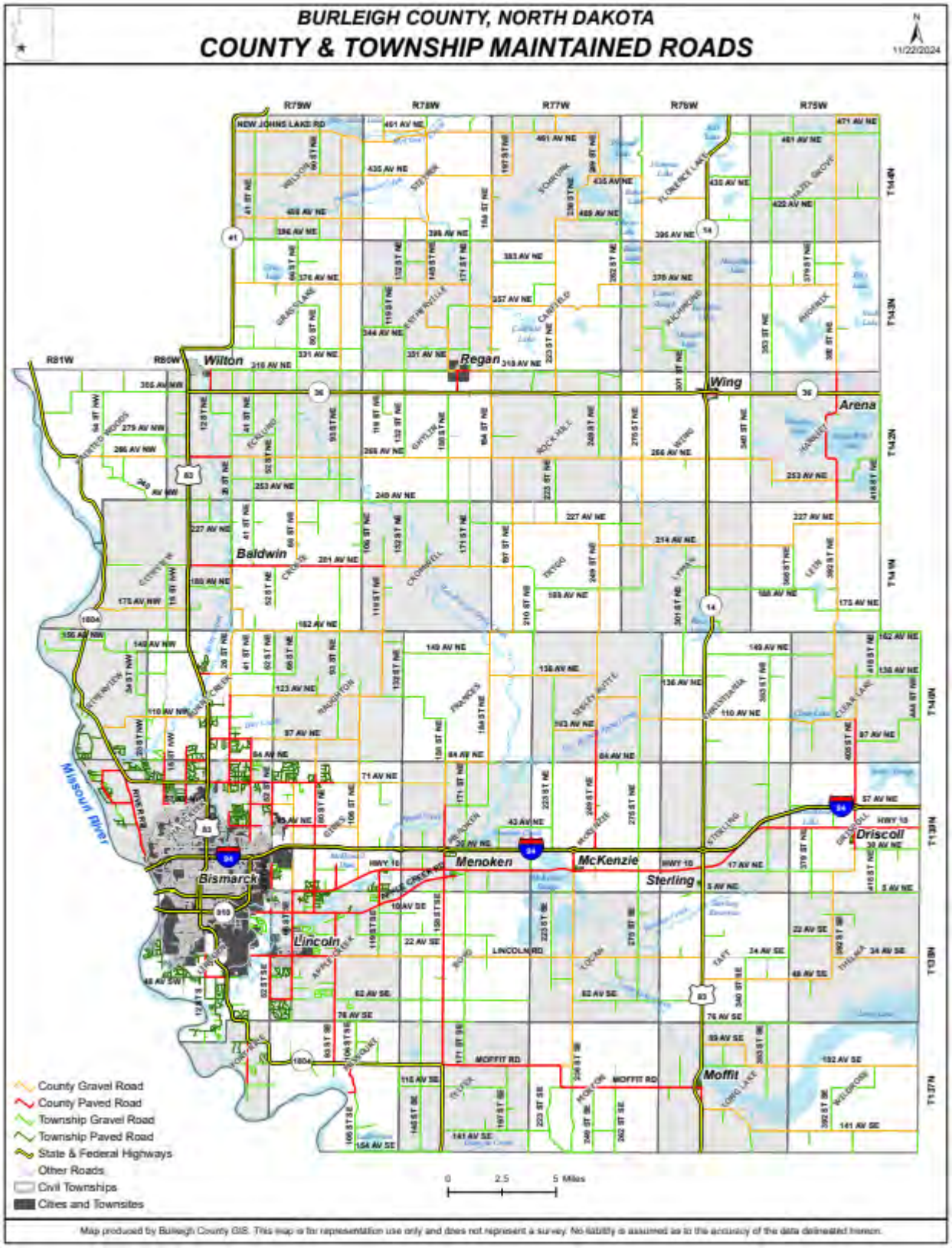
Source: Burleigh County website

Ice Jam Permanent Flood Protection Projects – South of Interstate 94



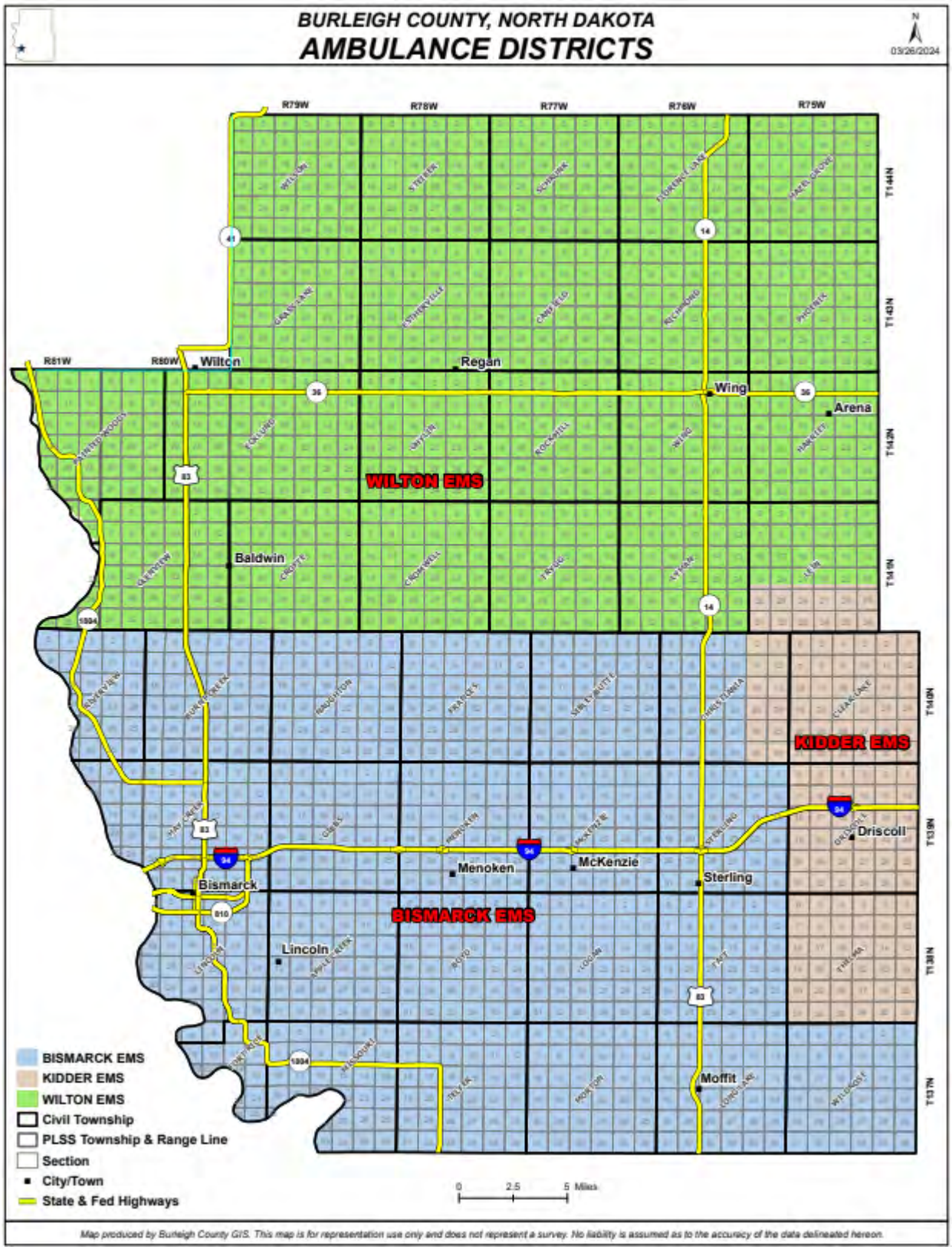
Source: Burleigh County website

Major Roadways in Burleigh County



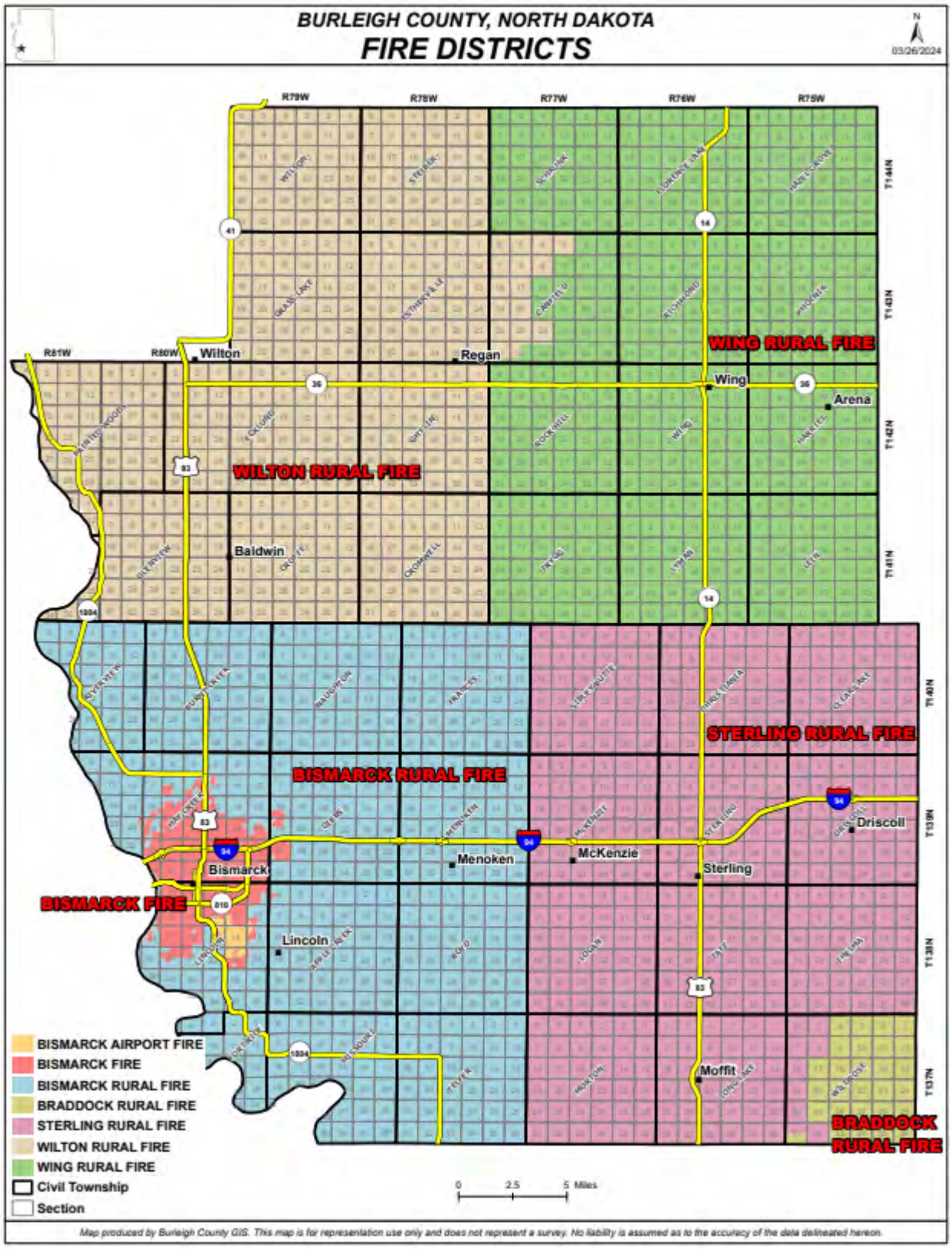
Source: Burleigh County website

Ambulance Response Areas



Source: Burleigh County website

Fire Response Districts



Source: Burleigh County website

ATTACHMENT 4: CAPABILITIES

Based on funding and staffing, improvements on capabilities are lacking for Lincoln, Regan, Wilton, and Wing.

Planning and Regulatory
Types of regulations, plans, and programs utilized. Burleigh County continues to pursue participation in the Community Rating System.

	Planning and Regulatory Capabilities				
	Burleigh County	**Lincoln**	**Regan**	**Wilton**	**Wing**
Annual Budget	*	*	*	*	*
Building Code	*	*	***	***	***
Burn Restrictions Protocol	*	*	*	*	*
Comprehensive Plan	*	*	***	***	***
Emergency Operations Plan	*	C	C	C	C
Stormwater Management Plan	*	*	***	***	***
Zoning Ordinance	*	*	***	*	*

*Fully utilize
**Partially utilize
***No need
****Lack of funds or staff
? Unknown
C Covered by County

Planning Mechanism	Supports	**Burleigh County**	**Lincoln**	**Regan**	**Wilton**	**Wing**
Comprehensive Plan	Land use planning Mitigation actions Risk assessment	X	X			
Emergency Operations Plan	Risk Assessment Capability Assessment	X	X	X	X	X
Emergency Action Plan (EAP) for Dams	McDowell Dam Garrison Dam	X	X			
Land Use Ordinances	Develop planning Risk Assessment Capability Assessment	X	X		X	
Mitigation Plan	Capability Assessment Risk Assessment Mitigation Actions	X	X	X	X	X

Administrative and Technical

Smaller communities have staffing and funding limitations which limit their capabilities. Engineering services contracted on an "as needed" basis for Regan, Wilton, and Wing. Wing Ambulanced folded into Wilton Ambulance and maintains a Quick Response Unit.

	Administrative & Technical Capabilities				
	Burleigh County	**Lincoln**	**Regan**	**Wilton**	**Wing**
Auditor	*	*	*	*	*
Emergency Manager	*	C	C	C	C
Engineering Staff	*	*	***	**	**
Ambulance	*	***	***	*	**
Public Works Staff	*	*	**	*	*
Fire Department	*	***	***	*	*
Law Enforcement	*	*	C	C	C
Governing Body	*	*	*	*	*
Water Resource Board	*	**	***	**	***

*Fully utilize
**Partially utilize
***No need
****Lack of funds or staff
? Unknown

Education and Outreach

Communication capabilities for each jurisdiction.

	Education & Outreach				
	Burleigh County	**Lincoln**	**Regan**	**Wilton**	**Wing**
Website	*	*	****	*	*
Social Media	*	*	****	*	*
StormReady	*	C	C	C	C
Outdoor Sirens	*	*	****	*	*
Automatic Notification System	*	C	C	C	C

*Fully utilize
**Partially utilize
***No need
****Lack of funds or staff
? Unknown
C Covered by County

Financial

General fund is the main source for each jurisdiction.

	Financial				
	Burleigh County	**Lincoln**	**Regan**	**Wilton**	**Wing**
Sales tax	*	*	**	*	**
General fund	*	*	*	*	*
Community Development Block Grant	**	**	**	**	*
Federal funding	*	*	*	*	*
State funding	*	*	*	*	*

*Fully utilize

**Does not utlize

Agency Capabilities

Bismarck Rural Fire Department

1. Mitigation and Risk Reduction: (including agency's role, capabilities, and programs that support mitigation actions.)
   a. Respond to fires to protect lives, limit injuries, and minimize damage to property and the environment.
   b. Respond to accidents to provide rescue assistance.
   c. Assist Emergency Medical Services in providing emergency assistance to sick and injured (first responders).
   d. Provide standard firefighting manpower and equipment.
   e. Respond to spills and releases of hazardous materials and assist in mitigating the detrimental human and environmental effects of these occurrences.
   f. Respond to emergencies resulting from natural occurrences such as storms, floods, etc., and assist in mitigating the detrimental results of these occurrences.
   g. Provide training for department members that enables them to carry out their respective duties and responsibilities effectively and efficiently.
   h. Develop and provide educational programs that promote the prevention of fires and encourage fire-safe and fire-smart activities.
   i. Assist in enforcement of fire ordinances.
   j. Fire investigation.
   k. Provide assistance to other jurisdictions, as department resources and commitments allow.
   l. Inspections and preplanning within the fire district to reduce hazards and aid in fire prevention.
   m. Assist with the County's Tier Two reporting for hazardous materials.
   n. In disaster situations, provide assistance in warning, rescue, evacuation, and situation updates.

2. Responsibility and authority in regulating, inspecting, or funding of projects:
   a. Grant recipient or project manager

3. Leadership and coordination with other government agencies:
   a. Local Agencies: In efforts to decrease vulnerability to hazards, the Bismarck Rural Fire Department coordinates with various local agencies. These agencies include Burleigh County Emergency Management, Bismarck Fire Department, Bismarck Police Department, Burleigh County Sheriff's Department, local Public Works, and local Emergency Medical Services.
   b. Non-local Agencies: North Dakota State Fire Marshal and the Federal Emergency Management Agency.

4. General recommendations/Emergency Management concerns:
   a. None.

Bismarck/Burleigh Public Health

1. Mitigation and Risk Reduction: (including agency's role, capabilities, and programs that support mitigation actions)
   a. Deal with bona fide health hazards using cause and effect in those areas for both mitigation and risk reduction. If it is a hazard affecting any number of persons and within the scope of public health, Bismarck/Burleigh Public Health will mitigate or exercise risk reduction through several methods ranging from enforcement of statutes to immunization programs.
   b. Environmental Health has the knowledge and access to the State Health Department for mitigation of incidents with hazardous or toxic wastes.
   c. Programs include public health nursing, immunization programs, emergency preparedness, and tobacco cessation.

2. Responsibility and authority in the regulating, inspecting, or funding of projects.
   a. Bismarck/Burleigh Public Health is a unit of state government that operates through agreements or Memorandums of Understanding with the North Dakota Department of Health to enforce state public health statutes within the five-county district. Tax levies provide funding. There are no funding programs for non-operational programs.

3. Leadership and coordination with other government agencies:
   a. Local Agencies: Within the scope of public health, Bismarck/Burleigh Public Health coordinates with the following local agencies: Bismarck/Burleigh Emergency Management, local law enforcement agencies (city and county), local school boards, hospitals, clinics, United States Postal Service, volunteer agencies, and planning and zoning agencies.
   b. Non-local Agencies: Within the scope of public health, Bismarck/Burleigh Public Health coordinates with the following agencies: North Dakota Department of Health and state and federal law enforcement agencies.

4. General recommendations/Emergency Management concerns:
   a. Public Health is normally underfunded and understaffed at all levels of government. Should Bismarck/Burleigh Public Health be called upon for expertise at a time of emergency or disaster, it normally does not have instrumentation for site level determinations of any kind without support from other agencies.
   b. Public health agencies should be included in equipment storage, e.g., FEMA equipment "stored" and used at public health agencies, rather than being stored at a warehouse. For example, radio equipment that belongs to FEMA is based at county emergency management offices; the same could be done with air sampling equipment or other instruments/kits etc., which could be used by public health agencies both for daily work and at a time of emergency or disaster.

Burleigh County Emergency Management

1. Mitigation and Risk Reduction: (including agency's role, capabilities, and programs that support mitigation actions.)
   a. Coordinate emergency planning and response activities with numerous city and county agencies. Planning encompasses preparedness, response, recovery, and mitigation.
   b. Responsible for daily operations of the Emergency Operations Center.
   c. Update and exercise emergency operations and mitigation plans.
   d. Coordinate State-sponsored training for city and county agencies including law enforcement, public health, social services, fire departments, emergency medical services, etc.
   e. Coordinate the County's Local Emergency Planning Committee.
   f. Coordinate the County's Tier II reporting for hazardous materials.
   g. Coordinate public awareness and educational programs via newspapers, radio, and schools to decrease vulnerability to hazards.
   h. Coordinate timely and effective public information releases during emergency situations.
   i. During a disaster declaration, emergency management will have all county resources at their disposal including manpower, communications, and equipment.
   j. With effective planning, training, and exercising, emergency management can help to mitigate potential hazards within the county.
   k. Assist in damage assessment and coordinate with state and federal agencies for recovery assistance.

2. Responsibility and authority in the regulating, inspecting, or funding of projects:
   a. Assist with applications for federal and state funding such as the Hazard Mitigation Grant Program.

3. Leadership and coordination with other government agencies:
   a. Local Agencies: Burleigh County Emergency Management coordinates with appropriate local agencies to ensure preparedness, response, recovery, and mitigation. These agencies include Burleigh County Commissioners, Bismarck/Burleigh Public Health, Burleigh County Highway Department, Burleigh County Sheriff's Department, and various other law enforcement, fire, communication, and emergency medical agencies.
   b. Non-local Agencies: Burleigh County Emergency Management coordinates with numerous state and federal agencies. These agencies include the North Dakota Department of Emergency Services, North Dakota Highway Patrol, North Dakota Health Department, North Dakota Department of Transportation, and the Federal Emergency Management Agency.

4. General recommendations/Emergency Management concerns:
   a. A listing of eligible mitigation projects maintained for available grant funds.
   b. Burleigh County is constantly striving to improve planning and exercise activities and response capabilities; however, the threat of potential hazards is increasing with increasing population and transportation thereby increasing the need for resources, training, and awareness.

Burleigh County Extension Service

1. Mitigation and Risk Reduction: (including agency's role, capabilities, and programs that support mitigation actions.)
   a. The Burleigh County Extension Service is linked in a unique partnership with North Dakota State University and the United States Department of Agriculture to provide practical, research-based information and educational programs to address critical issues facing individuals, families, agricultural producers, business operators, and communities.
   b. County Extension Agents serve as subject-matter experts, educational planners, adult and youth teachers and community facilitators in several areas including agriculture and natural resources, horticulture, family and consumer sciences, 4-H and youth community development.
   c. Provide planning, designing, implementing, and evaluating of educational programs for livestock and forage clientele.
   d. Areas of responsibility include beef and dairy cattle, swine, other livestock, water quality, waste management, and forages.
   e. Provide programming for county citizens in the areas of family financial management, environmental concerns, housing, health and wellness, aging, foods and nutrition, parenting, and human development.
   f. Serve as an information resource in dealing with drought, winter storms, summer storms etc. in relation to agriculture, environment, water resources, etc.
   g. Assist with damage assessment related to agriculture.

2. Responsibility and authority in regulating, inspecting, or funding of projects:
   a. Authority is at federal level.

3. Leadership and coordination with other government agencies:
   a. Local Agencies: Burleigh County Emergency Management and Bismarck/Burleigh Public Health.
   b. Non-local Agencies: North Dakota State University, North Dakota State Health Department, United States Department of Agriculture, and Farm Service Agency.

4. General recommendations/Emergency Management concerns:
   a. Urban development taking over agricultural lands.

Burleigh County Highway Department

1. Mitigation and Risk Reduction: (including agency's role, capabilities, and programs that support mitigation actions)
   a. Design culverts and overflow sections. The County Highway Department follows a very detailed list of design standards for all projects within the county.
   b. Continually working with the Department of Transportation on various projects since the DOT dispenses federal funding. While the DOT provides technical advice concerning guidelines and standards, they do not provide equipment, materials, or personnel.

2. Responsibility and authority in the regulating, inspecting, or funding of projects:
   a. Responsible for and have authority to regulate and inspect all projects completed within the county.
   b. All projects funded by the state or federal government are designed by a professional engineer and meet the usual acceptable federal standards. Inspection of federal aid projects is the responsibility of the engineering staff and is overseen by the North Dakota Department of Transportation to ensure standards are met. Most county projects are designed with in-house expertise and engineers are consulted only if in-house schedules are overloaded or if problems arise.
   c. All funding in one way or another comes through the county, whether it is a certain percentage of the federal aid project or 100% of the county projects.

3. Leadership and coordination with other government agencies:
   a. Local Agencies: The County Highway Department interacts frequently with the Sheriff's Department on road usage and speed zones. There is almost daily contact with organized township boards concerning safety, road repairs, road improvements, drainage, and signing. There is considerable interaction with City Planner and Building Inspector concerning rural subdivision roadway development and zoning code enforcement. The County Road Department coordinates with various county agencies concerning right of way and right of way purchasing. The legal aspect of right of way purchasing is overseen by the States Attorney's Office. The land values are occasionally developed by the Tax Equalization office and approved by the County Commission.
   b. Non-local Agencies: The County Highway Department coordinates with various State and Federal agencies for technical assistance, permitting, environmental concerns, archeological sites, and cultural issues. These agencies include the North Dakota Department of Transportation, US Fish and Wildlife, Corp of Engineers, and the North Dakota Historical Society.

4. General recommendations/Emergency Management concerns:
   a. Burleigh County Highway Department should assist local government with floodplain management and water development permitting.

Burleigh County Water Resource Board

1. Mitigation and Risk Reduction
   a. Assist with water damage assessment
   a. Provide maps

2. Non-local agencies – ND Department of Water Resources

Burleigh County Sheriff's Department

1. Mitigation and Risk Reduction: (including agency's role, capabilities, and programs that support mitigation actions.)
   a. Responsible for law enforcement and criminal investigation in unincorporated areas of the county and in smaller towns that do not have police departments.
   b. Provide 911 emergency response through the Central Dakota Communications Center.
   c. Provide standard law enforcement manpower and equipment.
   d. In disaster situations, provide warning, rescue assistance, evacuation assistance, security, traffic control, and information assistance.
   e. Have mutual aid agreements with all surrounding counties and the North Dakota State Highway Patrol.

2. Responsibility and authority in the regulating, inspecting, or funding of projects:
   a. Grant recipient or project manager

3. Leadership and coordination with other government agencies:
   a. Local Agencies: Within the scope of law enforcement, the Burleigh County Sheriff's Department coordinates with various local agencies. These agencies include Burleigh County Emergency Management and various local police departments.
   b. Non-local Agencies: Burleigh County Sheriff's Department coordinates with appropriate state and federal agencies including North Dakota Highway Patrol, North Dakota Attorney General's Office, Bureau of Criminal Investigation, North Dakota State Radio, North Dakota Department of Transportation, and Federal Bureau of Investigation.

4. General recommendations/Emergency Management concerns:
   a. None.

Lincoln Police Department

1. Mitigation and Risk Reduction: (including agency's role, capabilities, and programs that support mitigation actions.)
   a. Responsible for law enforcement and criminal investigation in the City of Lincoln.
   b. Provide 911 emergency response through the Central Dakota Communications Center.
   c. Provide standard law enforcement manpower and equipment.
   d. In disaster situations, provide warning, rescue assistance, evacuation assistance, security, traffic control, and information assistance.
   e. Have mutual aid agreements with surrounding jurisdictions.

2. Responsibility and authority in the regulating, inspecting, or funding of projects:
   a. Grant recipient or project manager

3. Leadership and coordination with other government agencies:
   a. Local Agencies: Within the scope of law enforcement, the Lincoln Police Department coordinates with various local agencies. These agencies include Burleigh County Sheriff's Department and Burleigh County Emergency Management.
   b. Non-local Agencies: Lincoln Police Department coordinates with appropriate state and federal agencies including North Dakota Highway Patrol, North Dakota Attorney General's Office, Bureau of Criminal Investigation, North Dakota State Radio, North Dakota Department of Transportation, and Federal Bureau of Investigation.

4. General recommendations/Emergency Management concerns:
   a. None.

Metro Area Ambulance Service: Emergency response, patient care, transport, and public awareness and continuing education programs. Metro also has a disaster response trailer available.

Kidder County Ambulance (Steele): Emergency response, patient care, transport, and public awareness and continuing education programs.

Sterling Rural Fire Department: General fire suppression, rescue, hazardous materials response, public awareness, and educational programs.

Wilton Ambulance: Emergency response, patient care, transport, and public awareness and continuing education programs.

Wilton Rural Fire Department: General fire suppression, rescue, hazardous materials response, public awareness, and educational programs.

Wing Rural Fire Department: General fire suppression, rescue, hazardous materials response, public awareness, and educational programs.

Other Agency Resources

Basin Electric: Provide engineering expertise and damage assessment (utilities).

Burleigh County Human Service Zone: Temporary assistance to needy families (TANF), food stamps, medical assistance, childcare assistance, child protection and family social work services, home and community-based services for the elderly and disabled.

Capital Electric: Provide engineering expertise and damage assessment (utilities).

Montana Dakota Utilities: Provide engineering expertise and damage assessment (utilities).

North Dakota Agriculture Department: Assists with situation and damage assessment; coordination with USDA; hazmat technical assistance; state land use program.

North Dakota Fire Marshal: Hazmat route utilization; hazmat technical assistance; situation and damage assessment.

North Dakota Forestry Service: Debris removal from recreational facilities; technical assistance; situation and damage assessment.

North Dakota Game and Fish: Technical assistance; debris removal from recreational facilities; facility improvements; situation and damage assessment.

North Dakota Highway Patrol: Situation and damage assessment; provide transportation resources for movement of state personnel, supplies, and equipment to include air and ground reconnaissance; traffic control.

North Dakota Human Services: Insure liaison with private relief agencies for disaster victims.

North Dakota Job Service: Situation assessment and administration of disaster unemployment assistance programs.

North Dakota State Emergency Communications: Exercise readiness of warning systems and communication support.

South Central Regional Water District: Delivers a reliable supply of safe, affordable, high-quality water to members in a five-county area in central North Dakota including rural Burleigh County.

US Army Corps of Engineers: Water and dam management within the county. Provide technical expertise, sandbags, and heavy equipment.

Burleigh County
Multi-Hazard Mitigation Plan

Appendices

Participating Communities:

Burleigh County
City of Bismarck
City of Lincoln
City of Regan
City of Wilton
City of Wing

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APPENDIX A: INVITED STAKEHOLDERS AND PARTICIPATION

Stakeholder Participation	11-19-24 LEPC Mtg (Invited)	11-19-24 LEPC Mtg (Attended)	2-26-25 Burleigh County Dept Head Mtg	2-26-25 Burleigh County Dept Head Mtg (Attended)	03-20-25 Public Survey Published (Invited)	03-25-25 Flood Annex Update & Mitigation Project Review (Invited)	03-25-25 Flood Annex Update & Mitigation Project Review (Attended)	04-09-25 Burleigh County Water Resource Mtg	5-14-25 Burleigh County Water Resource Mtg	6-18-25 Burleigh County Water Resource Mtg	7-16-25 Burleigh County Water Resource Mtg	8-11-25 Wing Mtg	8-13-25 Burleigh County Water Resource Mtg	8-20-25 Fire Department Mtg	8-29-25 Wilton Mtg	09-19-25 Regan Mtg	10-10-25 City of Lincoln Mtg	10-29-25 Burleigh County Dept Head Mtg	11-17-25 Burleigh County Commission Mtg	12-17-25 Email
Media	X				X			X	X	X	X		X						X	X
Public	X				X			X	X	X	X		X						X	X
American Red Cross					X															
Apple Creek School					X															
Basin Electric Power Cooperative	X																			
Bismarck Administration	X				X															
Bismarck City Commission	X				X						X									
Bismarck Emergency Mgt	X	X			X															
Bismarck Environmental Health	X				X															
Bismarck Fire Dept	X				X															
Bismarck Parks Dept					X			X	X	X	X		X							
Bismarck Police Dept	X	X			X															
Bismarck Public Schools	X	X			X															
Bismarck Public Works	X	X			X															
Bismarck Rural Fire Dept	X	X			X									X						
Bismarck State College					X															
Bismarck State College (Embracing Diversity Committee)					X															
Bismarck/Burleigh Public Health	X	X			X															
Burleigh County Auditor			X		X													X		
Burleigh County Planning	X	X	X	X	X			X	X	X	X			X				X		
Burleigh County Commission	X				X															
Burleigh County Emergency Mgt	X	X	X	X	X	X	X	X				X		X	X	X	X	X		
Burleigh County Extension Service			X	X	X													X		
Burleigh County Finance			X	X	X													X		
Burleigh County GIS					X															
Burleigh County Highway Dept			X	X	X	X	X	X	X	X	X		X					X		
Burleigh County Housing Authority					X															
Burleigh County Human Resources			X	X	X													X		

Stakeholder Participation	11-19-24 LEPC Mtg (Invited)	11-19-24 LEPC Mtg (Attended)	2-26-25 Burleigh County Dept Head Mtg	2-26-25 Burleigh County Dept Head Mtg (Attended)	03-20-25 Public Survey Published (Invited)	03-25-25 Flood Annex Update & Mitigation Project Review (Invited)	03-25-25 Flood Annex Update & Mitigation Project Review (Attended)	04-09-25 Burleigh County Water Resource Mtg	5-14-25 Burleigh County Water Resource Mtg	6-18-25 Burleigh County Water Resource Mtg	7-16-25 Burleigh County Water Resource Mtg	8-11-25 Wing Mtg	8-13-25 Burleigh County Water Resource Mtg	8-20-25 Fire Department Mtg	8-29-25 Wilton Mtg	09-19-25 Regan Mtg	10-10-25 City of Lincoln Mtg	10-29-25 Burleigh County Dept Head Mtg	11-17-25 Burleigh County Commission Mtg	12-17-25 Email
Burleigh County Human Service Zone			X		X													X		
Burleigh County Recorder			X	X	X													X		
Burleigh County Senior Center					X															
Burleigh County Sheriff's Dept	X	X	X	X	X									X				X		
Burleigh County State's Attorney			X	X	X													X		
Burleigh County Tax Equalization			X		X													X		
Burleigh County Veteran Services			X	X	X													X		
Burleigh County Water Resource District					X	X	X	X	X	X	X		X							
Burlington Northern Santa Fe Railroad	X																			
Capital Electric Coop	X																			
CATCH ND					X															
Cenex	X																			
Central Dakota Communications Center	X				X									X						
CHI St Alexius Medical Center	X	X			X															
City of Bismarck	X				X															
City of Lincoln	X	X			X												X			
City of Regan					X											X				
City of Wilton					X										X					
City of Wing					X							X								
Custer District Health	X																			
Dakota Center for Independent Living					X															
Dakota Outright					X															
Designer Genes					X															
DMVW Railroad	X																			
Dream Center					X															
Emmons County Emergency Mgt					X															
Global Neighbors					X															
Heavens Helpers Soup Café					X															
Kidder County Emergency Mgt					X															
Lincoln Police Dept					X												X			

Stakeholder Participation	11-19-24 LEPC Mtg (Invited)	11-19-24 LEPC Mtg (Attended)	2-26-25 Burleigh County Dept Head Mtg	2-26-25 Burleigh County Dept Head Mtg (Attended)	03-20-25 Public Survey Published (Invited)	03-25-25 Flood Annex Update & Mitigation Project Review (Invited)	03-25-25 Flood Annex Update & Mitigation Project Review (Attended)	04-09-25 Burleigh County Water Resource Mtg	5-14-25 Burleigh County Water Resource Mtg	6-18-25 Burleigh County Water Resource Mtg	7-16-25 Burleigh County Water Resource Mtg	8-11-25 Wing Mtg	8-13-25 Burleigh County Water Resource Mtg	8-20-25 Fire Department Mtg	8-29-25 Wilton Mtg	09-19-25 Regan Mtg	10-10-25 City of Lincoln Mtg	10-29-25 Burleigh County Dept Head Mtg	11-17-25 Burleigh County Commission Mtg	12-17-25 Email
Lincoln Public Works					X												X			
Manning School					X															
McLean County Emergency Mgt					X															
Menoken School					X															
Mercer-Oliver Emergency Mgt																				X
Metro Area Ambulance	X				X															
Ministry on the Margins					X															
Missouri Valley Coalition for Homeless People					X															
Morton County Emergency Mgt	X	X			X															
National Weather Service					X															
Native Inc					X															
Naughton School					X															
ND Association of Counties					X															
ND Motor Carriers Association	X																			
ND Dept of Emergency Services	X	X			X															
ND Dept of Environmental Quality					X									X						
ND Dept of Human Services (refugee resettlement)					X															
ND Office of Legal Immigration					X															
ND Dept of Water Resources					X															
ND Protection and Advocacy					X															
ND State Council on Developmental Disabilities					X															
NuStar Energy					X															
Pride Inc					X															
Safety Kleen	X																			
Salvation Army					X															
Sanford Health Medical Center	X	X			X															
Sheridan County Emergency Mgt					X															
South Central Regional Water	X																			
SW Central Emergency Preparedness	X				X															
Sterling Rural Fire Dept	X				X															

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Sterling School					X															
United Tribes Technical College					X															
United Way					X															
University of Mary					X															
Welcome House					X															
Williston Basin Energy					X															
Wilton Ambulance	X				X										X	X				
Wilton Fire Dept	X				X									X		X				
Wilton Public Works					X									X						
Wilton School					X															
Wing Ambulance	X				X							X								
Wing Public Works					X							X								
Wing Rural Fire Dept	X				X							X		X						
Wing School					X															
Youth Empowering Social Status (YESS)					X															
Youthworks					X															

The Multi-Hazard Mitigation Plan is always available on the Burleigh County website:
Draft published May 19, 2025
Final draft published October 13, 2025

burleigh.gov/departments/emergency-management/mitigation/

Government Departments Boards/Committees Contact Us

2025 Burleigh County Multi-Hazard Mitigation Plan Update in Process

Please feel free to review the 2025 Draft Plan

If you have a mitigation idea that could reduce the impact of future emergencies or disasters in Burleigh County, please contact us by mail, e-mail, or phone.

2020 Burleigh County Multi-Hazard Mitigation Plan

(Federal Emergency Management Agency approved August 27, 2020)

Burleigh County Emergency Management maintains a Multi-Hazard Mitigation Plan. The Mitigation Plan is updated every five years and approved by the Federal Emergency Management Agency (FEMA). Our current plan was approved August 27, 2020 and is valid through August 26, 2025.

Please feel free to review the 2020 Approved (current) Plan

If you have a mitigation idea that could reduce the impact of future emergencies or disasters in Burleigh County, please contact us by mail, e-mail, or phone.

Mary Senger, Director
Burleigh County Emergency Management
4200 Coleman St
Bismarck, ND 58503
Email
Phone: 701-222-6727

Burleigh County
Local Emergency Planning Committee
4200 Coleman St
Bismarck, ND 58503
(701) 222-6727

Brad Erickson
Chairperson
Sanford Health System
300 N 7th St
Bismarck, ND 58501
701-323-6319
Bradley.Erickson@SanfordHealth.org

Crystalynn Kuntz
Vice Chairperson
Bismarck-Burleigh Public Health
407 S 26th St
Bismarck, ND 58504
701-355-1546
ckuntz@nd.gov

Mary Senger
Secretary/Treasurer
Burleigh County Emergency Manager
4200 Coleman St
Bismarck, ND 58503
701-222-6727
msenger@nd.gov

MEMORANDUM

TO: Local Emergency Planning Committee Member

FROM: Mary H. Senger, Emergency Management Director

DATE: November 13, 2024

SUBJECT: NEXT MEETING

Section 303(a) of SARA Title III (Superfund Amendment and Reauthorization Act of 1986) requires that each Local Emergency Planning Committee conduct meetings as required. Our next meeting is scheduled for November 19, 2024, 10:00 AM.

Agenda

1. Approval of November 7, 2023, Meeting Minutes
2. Community Right to Know Act
3. Tier II reporting
4. Committee membership
5. Financial report
6. Requests for expenditures
7. Public education
8. HazMat Response Plan (link)
9. Multi-Hazard Mitigation Plan Update
10. Election of officers
11. Any other items

Burleigh County

Department Head Meeting
221 N. 5th St.
Bismarck, ND 58501

Auditor/Treasurer
Mark Splonskowski

Building/Planning/Zoning
Mitch Flanagan

Buildings & Grounds
VACANT

Emergency Management
Mary Senger

Extension
Kelsey Deckert

Finance
Leigh Jacobs

Highway Department
Marcus Hall

Human Resources
Pamela Binder

Human Service Zone
Chelsea Flory

Recorder
Missy Hanson

Sheriff
Kelly Leben

State's Attorney
Julie Lawyer

Tax Equalization
Al Vietmeier

Veterans Service
Mark Landis

February 26, 2025
9:00 AM
1st Floor Conference Room
City/County Building

AGENDA

1. Approved Vendor List - Leigh
2. Multi-Hazard Mitigation Plan Update – Mary
3. Meal Waiver Policy and Form – Pam
4. Facilities Director Position – Pam
5. HRIS/Payroll System - Pam
6. Legislative Updates - All

Any other items

BURLEIGH COUNTY WATER RESOURCE DISTRICT AGENDA

Wednesday, April 9, 2025 at 8:00 am

Tom Baker Room, 221 N. 5th Street Bismarck

8:00 a.m. – Call to Order

1. Roll Call (Reep, Landenberger, Jones, Smith, Mischel):
2. **Approval of 03/12/2025 Minutes:**
3. **Amendments and Approval of Agenda:**
4. Comments from Members of the Public: (For Items Not on the agenda):
5. McDowell Dam (Landenberger):
    a. Supplemental Water Supply
        i. Easement Negotiations (Appraisals Complete) – Letters to be mailed
        ii. Updated Water Supply Simulation (Memorandum) – revisions pending
    b. Bank Stabilization and Trail Protection – Spring 2025 (USACE – NWP, Solicitations – April)
    c. Emergency Action Plan (Exercise TDB)
6. Financial Reports (Reep):
    a. **Balance Sheet 03/31/2025**
    b. **P&L 03/31/2025**
    c. CD Renewals
7. Drainage Permits/Complaints/Issues: *Open:*
    a. River Road – Box Culvert and Channel Cleanout (BCHD Request) – Schedule Pending
    b. Keelboat Park – Section 408 Maintenance Request (Developer Request)
        i. Easements Researched along with O&M Obligations
        ii. Municipal 6th Plat – (Suggested revisions to City)
8. Drainage Permits/Complaints/Issues: *Closed:*
9. Projects:
    a. Hoge Island Stabilization:
        i. Access Easement Revisions (Pending – Spring 2025)
    b. Apple Creek U-Mary Slide – Emergency Action Plan (Smith)
        i. HMGP Grant Application – Resubmitted (comments received)
        ii. Stakeholder Meeting – (April 7, 2025)
        iii. DWR – Web Grant Submittal (Waiting on DES comments)
10. Other Old Business:
    a. Burleigh County CRS (Update – Ongoing, Community Action Visit – Tentative March 2025)
11. New Business
    a. 2025 Legislative Update
    b. Extension of Time/Beneficial Use Form – Water Permit No. 6071 - Requested
    c. LowKey Contract - Insurance
    d. Multi-Hazard Mitigation Plan Update (Mary Senger)
    e. Temporary Water Permit – Central Specialties, Inc.
    f. Temporary Water Permit – Knife River Materials

BURLEIGH COUNTY WATER RESOURCE DISTRICT AGENDA

Wednesday, May 14, 2025 at 8:00 am

Tom Baker Room, 221 N. 5th Street Bismarck

8:00 a.m. – Call to Order

1. Roll Call (Reep, Landenberger, Jones, Smith, Mischel):
2. **Approval of 04/9/2025 Minutes:**
3. **Amendments and Approval of Agenda:**
4. Comments from Members of the Public: (For Items Not on the agenda):
5. McDowell Dam (Landenberger-Mischel):
    a. Supplemental Water Supply
        i. Easement Negotiations (Appraisals Complete) – Letters mailed
            1. New Landowner – recent purchase - contacted
        ii. Updated Water Supply Simulation (Memorandum) – revisions pending
    b. Bank Stabilization and Trail Protection – Spring 2025 (USACE – NWP, Solicitations – May)
    c. Emergency Action Plan (Exercise TDB)
6. Financial Reports (Reep):
    a. **Balance Sheet 03/31/2025 and 04/30/2025**
    b. **P&L 03/31/2025 and 04/30/2025**
    c. Pledged Securities
    d. **ESRI Renewal Quote**
7. Drainage Permits/Complaints/Issues: *Open:*
    a. River Road – Box Culvert and Channel Cleanout (Pending)
    b. Keelboat Park – Section 408 Maintenance Request (Developer Request)
        i. Easements Researched along with O&M Obligations (DWR Meeting)
        ii. Municipal 6th Plat – (City to revise easement designation, sovereign land)
    c. HawkTree HOA – Private Culvert Placement, SWMP Compliance – Jurisdictional Question
8. Drainage Permits/Complaints/Issues: *Closed:*
9. Projects:
    a. Hoge Island Stabilization:
        i. Access Easement Revisions (Pending – Spring 2025)
    b. Apple Creek U-Mary Slide – Emergency Action Plan (Smith)
        i. HMGP Grant Application – Submitted to FEMA
        ii. Braun/BGC initial review process underway
        iii. DWR – Web Grant Submitted (Letter)
10. Other Old Business:
    a. Burleigh County CRS (Update – Ongoing, Community Action Visit – Pending 2025)
11. New Business
    a. 2025 Legislative Update
    b. LowKey Contract - Insurance
    c. Multi-Hazard Mitigation Plan Update (Mary Senger) – Comments Requested

BURLEIGH COUNTY WATER RESOURCE DISTRICT AGENDA
Wednesday, June 18, 2025 at 8:00 am
Tom Baker Room, 221 N. 5th Street Bismarck

8:00 a.m. – Call to Order

1. Roll Call (Reep, Landenberger, Jones, Smith, Mischel):
2. **Approval of 05/14/2025 Minutes:**
3. **Amendments and Approval of Agenda:**
4. Comments from Members of the Public: (For Items Not on the agenda):
5. McDowell Dam (Landenberger-Mischel):
    a. Supplemental Water Supply
        i. Easement Negotiations (New Offer letters Sent)
        ii. Updated Water Supply Simulation (Memorandum) – revisions pending
    b. **Bank Stabilization and Trail Protection – Notice of Award/Notice to Proceed (Bohlman)**
    c. Emergency Action Plan (Exercise TDB)
6. Financial Reports (Reep):
    a. **Balance Sheet 05/31/2025**
    b. **P&L 05/31/2025**
    c. **2026 Budget**
    d. **CDs**
7. Drainage Permits/Complaints/Issues: *Open:*
    a. River Road – Box Culvert and Channel Cleanout (Pending)
    b. Keelboat Park
        i. Easement research continues – Memorandum pending
    c. Hawk Tree HOA – Private Culvert Placement, SWMP Compliance – Jurisdictional Question
        i. Under Review - time required due to extended records
    d. Mike Koch – Revisited (Special Assessment District Option)
    e. Chase Dewitz – Tile Permit Application (Fee Requirement)
8. Drainage Permits/Complaints/Issues: *Closed:*
9. Projects:
    a. Hoge Island Stabilization:
        i. Access Easement Revisions (Summer 2025)
    b. Apple Creek U-Mary Slide – Emergency Action Plan (Smith)
        i. HMGP Grant Application – FEMA Approval
        ii. Braun/BGC initial review process underway
        iii. DWR – Web Grant Submitted (Letter) – Request Denied
10. Other Old Business:
    a. Burleigh County CRS (Update – Ongoing, Community Action Visit – Pending 2025)
11. New Business
    a. Multi-Hazard Mitigation Plan Update (Mary Senger) – Comments Requested
    b. Comment Policy – Board Meetings

BURLEIGH COUNTY WATER RESOURCE DISTRICT AGENDA

Wednesday, July 16, 2025 at 8:00 am

Tom Baker Room, 221 N. 5th Street Bismarck

8:00 a.m. – Call to Order

1. Roll Call (Reep, Landenberger, Jones, Smith, Mischel):
2. **Approval of 06/18/2025 Minutes:**
3. **Amendments and Approval of Agenda:**
4. Comments from Members of the Public: (For Items Not on the agenda):
5. McDowell Dam (Landenberger-Mischel):
    a. Supplemental Water Supply
        i. Easement Negotiations (New Offer letters Sent)
        ii. Updated Water Supply Simulation (Memorandum)
            1. **Transmittal to DWR**
    b. Bank Stabilization and Trail Protection – Construction Underway
    c. DWR Cost Share Reimbursement Request
    d. Emergency Action Plan (Exercise TDB)
6. Financial Reports (Reep):
    a. **Balance Sheet 06/30/2025**
    b. **P&L 06/30/2025**
    c. **2026 Budget**
7. Drainage Permits/Complaints/Issues: *Open:*
    a. River Road – Box Culvert and Channel Cleanout (Pending)
    b. Keelboat Park
        i. Easement research continues – Response to DWR Pending
    c. Hawk Tree HOA – Private Culvert Placement, SWMP Compliance – Jurisdictional Question
        i. Under Review - time required due to extended records
    d. Mike Koch – Revisited (Special Assessment District Option) – Under Review
    e. Chase Dewitz – Tile Permit Application (Ownership Response)
8. Drainage Permits/Complaints/Issues: *Closed:*
9. Projects:
    a. Hoge Island Stabilization:
        i. Access Easement Revisions (Summer 2025)
        ii. **Homelvig Inquiry – Letter Response**
    b. Apple Creek U-Mary Slide – Emergency Action Plan (Smith)
        i. HMGP Grant Application – FEMA Approval – Agreements Signed/Returned
        ii. Braun/BGC initial review process ongoing
            1. Scope Revision – Control Point Survey
10. Other Old Business:
    a. Burleigh County CRS (Update – Ongoing, Community Action Visit – Pending 2025)
    b. Multi-Hazard Mitigation Plan Update (Mary Senger) – Comments Requested
    c. **Comment Policy – Board Meetings**

Burleigh County Emergency Management
4200 Coleman St
Bismarck ND 58503
(701) 222-6727
burleigh.gov

Multi-Hazard Mitigation Plan Review

August 11, 2025
10:00 AM
City of Wing

AGENDA

1. Review draft mitigation plan (https://www.burleigh.gov/media/bjlha2g3/2025-burleigh-mhmp-update-reduced.pdf)
    a. Layout and content
    b. Mitigation projects (status and anything new) and priorities
    c. Mitigation capabilities
2. Approval process
3. Grant opportunities

BURLEIGH COUNTY WATER RESOURCE DISTRICT AGENDA
Wednesday, August 13, 2025 at 8:00 am
Tom Baker Room, 221 N. 5th Street Bismarck

8:00 a.m. – Call to Order

1. Roll Call (Reep, Landenberger, Jones, Smith, Mischel):
2. **Approval of 07/16/2025 Minutes:**
3. **Amendments and Approval of Agenda:**
4. Comments from Members of the Public: (For Items Not on the agenda):
5. McDowell Dam (Landenberger-Mischel):
    a. Supplemental Water Supply
        i. Easement Negotiations (Van Beek Recorded, Anderson Pending)
        ii. Conditional Water Permit – Extended to February 2028
        iii. Consideration of grant application process – OHF/SWC
    b. Bank Stabilization and Trail Protection – Construction Complete Final Pay Request (Travis)
    c. Emergency Action Plan (Exercise TDB)
    d. Insurance Claim
6. Financial Reports (Reep):
    a. **Balance Sheet 07/31/2025**
    b. **P&L 07/31/2025**
    c. 2026 Budget
7. Drainage Permits/Complaints/Issues: *Open:*
    a. River Road – Box Culvert and Channel Cleanout (Pending)
    b. Keelboat Park
        i. Easement research continues – Response to DWR Pending
    c. Hawk Tree HOA – Private Culvert Placement, SWMP Compliance – Jurisdictional Question
        i. Under Review – Memorandum to be prepared
    d. Mike Koch – Revisited (Special Assessment District Option) – Under Review
8. Drainage Permits/Complaints/Issues: *Closed:*
9. Projects:
    a. Hoge Island Stabilization:
        i. Access Easement Revisions (Fall 2025)
        ii. Homelvig Inquiry – Letter Response
    b. Apple Creek U-Mary Slide – Emergency Action Plan (Smith)
        i. Braun/BGC initial review process ongoing – instrumentation installation September
            1. Scope Revision – Control Point Survey – on Hold
10. Other Old Business:
    a. **Crystal Springs Watershed Initiative – Presentation and Optional Position Statement**
    b. Burleigh County CRS (Update – Ongoing, Community Action Visit – Pending 2025)
    c. Multi-Hazard Mitigation Plan Update (Mary Senger) – Comments Requested

Burleigh County Emergency Management
4200 Coleman St
Bismarck ND 58503
(701) 222-6727
burleigh.gov

Fire Department Meeting

August 20, 2025
10:00 AM
Burleigh County EOC

A G E N D A

1. Controlled burn procedures
2. Staffing and capabilities
3. Radios
4. Wildland urban interface
5. Mitigation projects

Burleigh County Emergency Management
4200 Coleman St
Bismarck ND 58503
(701) 222-6727
burleigh.gov

Multi-Hazard Mitigation Plan Review

August 29, 2025
11:00 AM
City of Wilton

A G E N D A

1. Review draft mitigation plan (https://www.burleigh.gov/media/bjlha2g3/2025-burleigh-mhmp-update-reduced.pdf)
   a. Layout and content
   b. Mitigation projects (status and anything new) and priorities
   c. Mitigation capabilities
2. Approval process
3. Grant opportunities

Burleigh County Emergency Management
4200 Coleman St
Bismarck ND 58503
(701) 222-6727
burleigh.gov

Multi-Hazard Mitigation Plan Review

September 19, 2025
10:30 AM
City of Regan

A G E N D A

1. Review draft mitigation plan (https://www.burleigh.gov/media/bjlha2g3/2025-burleigh-mhmp-update-reduced.pdf)
   a. Layout and content
   b. Mitigation projects (status and anything new) and priorities
   c. Mitigation capabilities
2. Approval process
3. Grant opportunities

Burleigh County Emergency Management
4200 Coleman St
Bismarck ND 58503
(701) 222-6727
burleigh.gov

Multi-Hazard Mitigation Plan Review

October 10, 2025
10:00 AM
City of Lincoln

A G E N D A

1. Current grant award for generators ($90,000)
2. Emergency Operations Plan (previously sent) and any chances
3. Review draft mitigation plan (https://www.burleigh.gov/media/bjlha2g3/2025-burleigh-mhmp-update-reduced.pdf)
   a. Layout and content
   b. Mitigation projects (status and anything new) and priorities
   c. Mitigation capabilities
4. Approval process
5. Grant opportunities

APPENDIX B: PUBLIC SURVEY

March 20, 2025, Public Survey Published

Emergency Management
4200 Coleman St
Bismarck, ND 58503
701.222.6727

NEWS RELEASE
FOR IMMEDIATE RELEASE

Contact: Mary Senger, Burleigh County Emergency Manager, 701-222-6727
Gary Stockert, City of Bismarck Emergency Manager, 701-222-6727

March 20, 2025

Burleigh County and City of Bismarck Seek Community Input on Mitigation Plan Update

Bismarck, ND—Burleigh County and the City of Bismarck want your input regarding how to make our community safer from potential hazards/disasters. We're examining the hazards facing our community as well as strategies to mitigate (reduce or eliminate) their impact. Our current plans have been approved by the Federal Emergency Management Agency and require an update every five years.

Citizens are invited to complete a brief survey by April 10th. The survey is available online at www.burleigh.gov and www.bismarcknd.gov

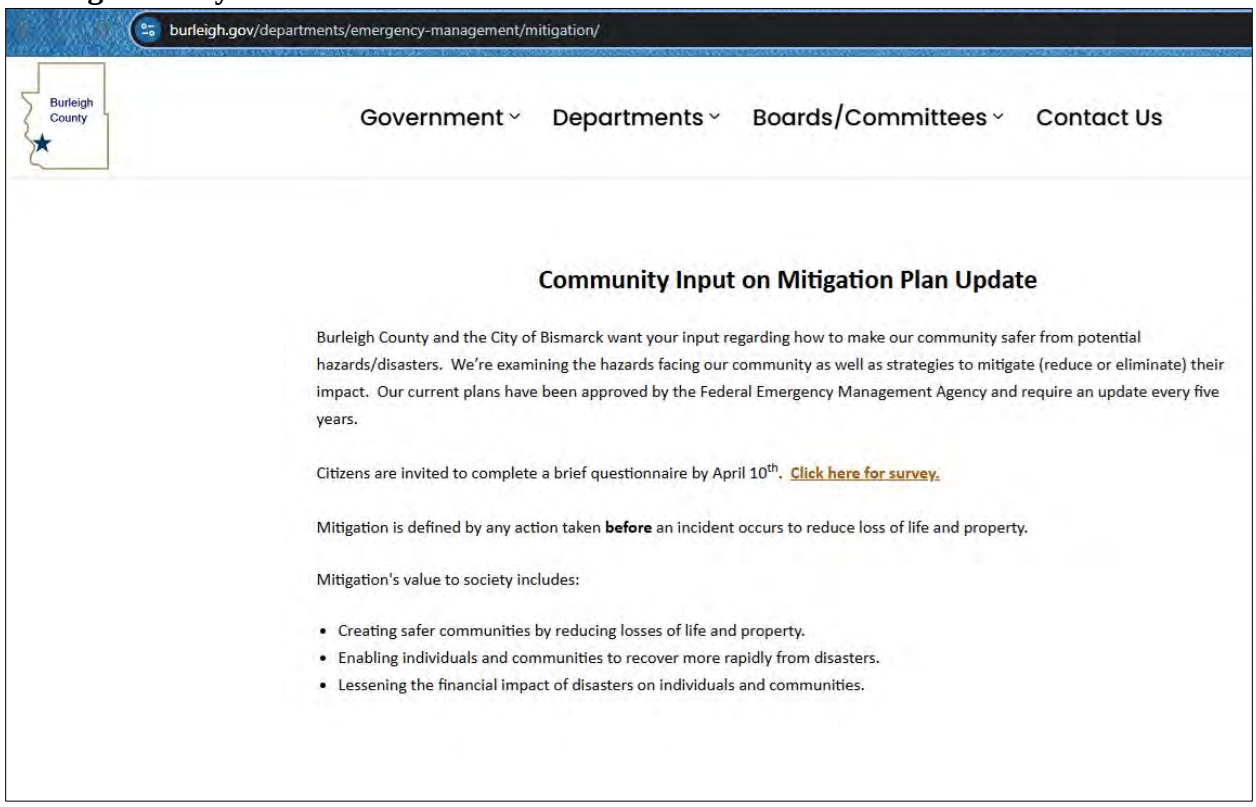
Mitigation is defined by any action taken **before** an incident occurs to reduce loss of life and property.

Mitigation's value to society includes:

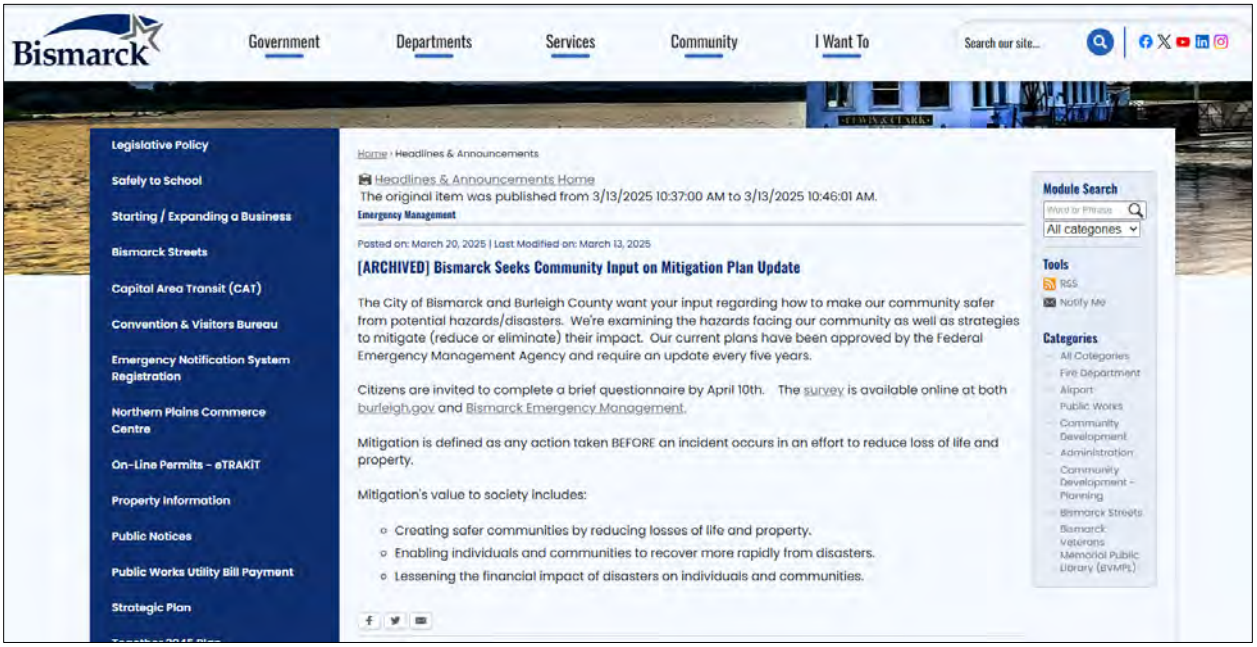
- Creating safer communities by reducing losses of life and property.
- Enabling individuals and communities to recover more rapidly from disasters.
- Lessening the financial impact of disasters on individuals and communities.

###

Burleigh County Website

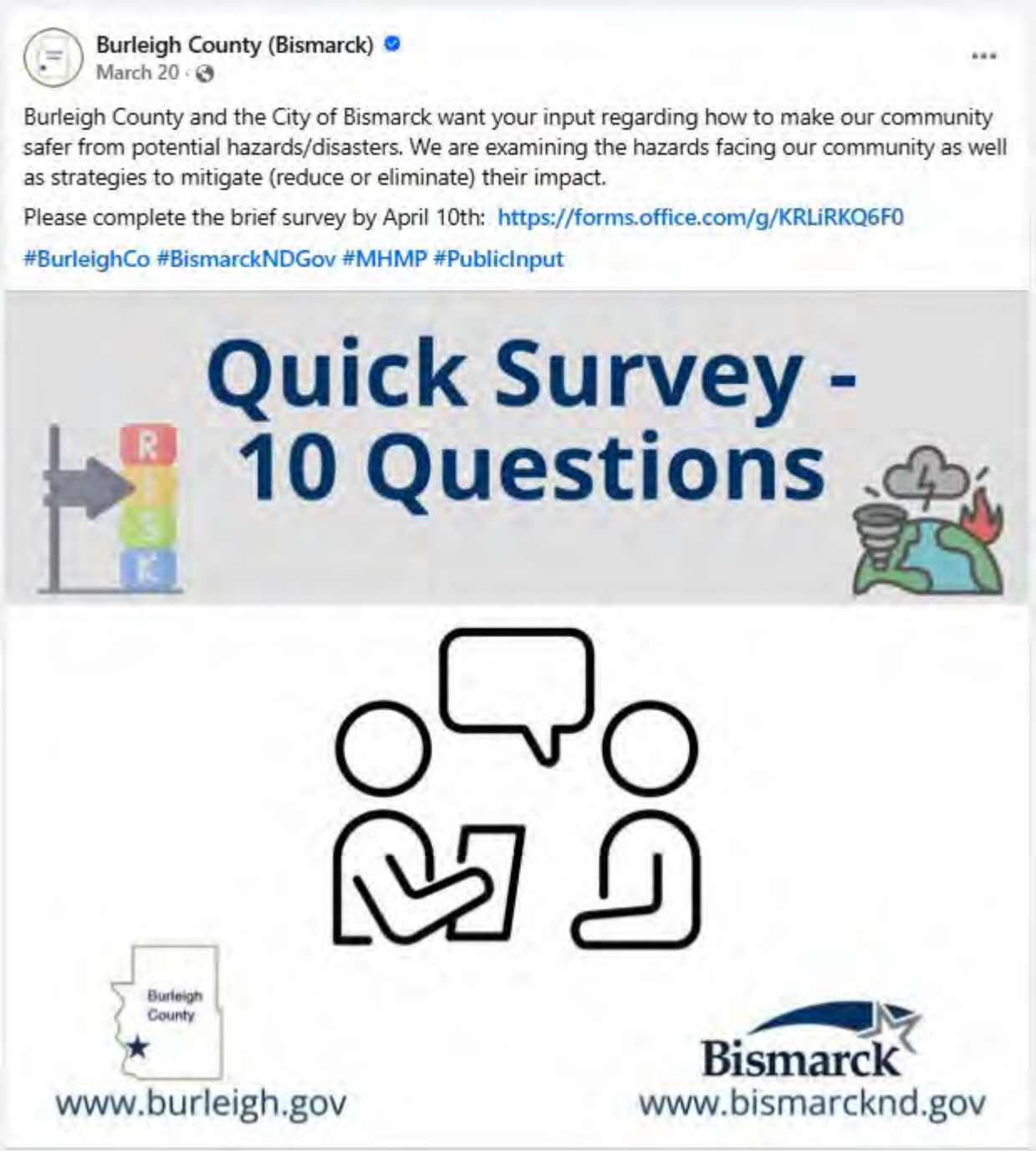


City of Bismarck Website

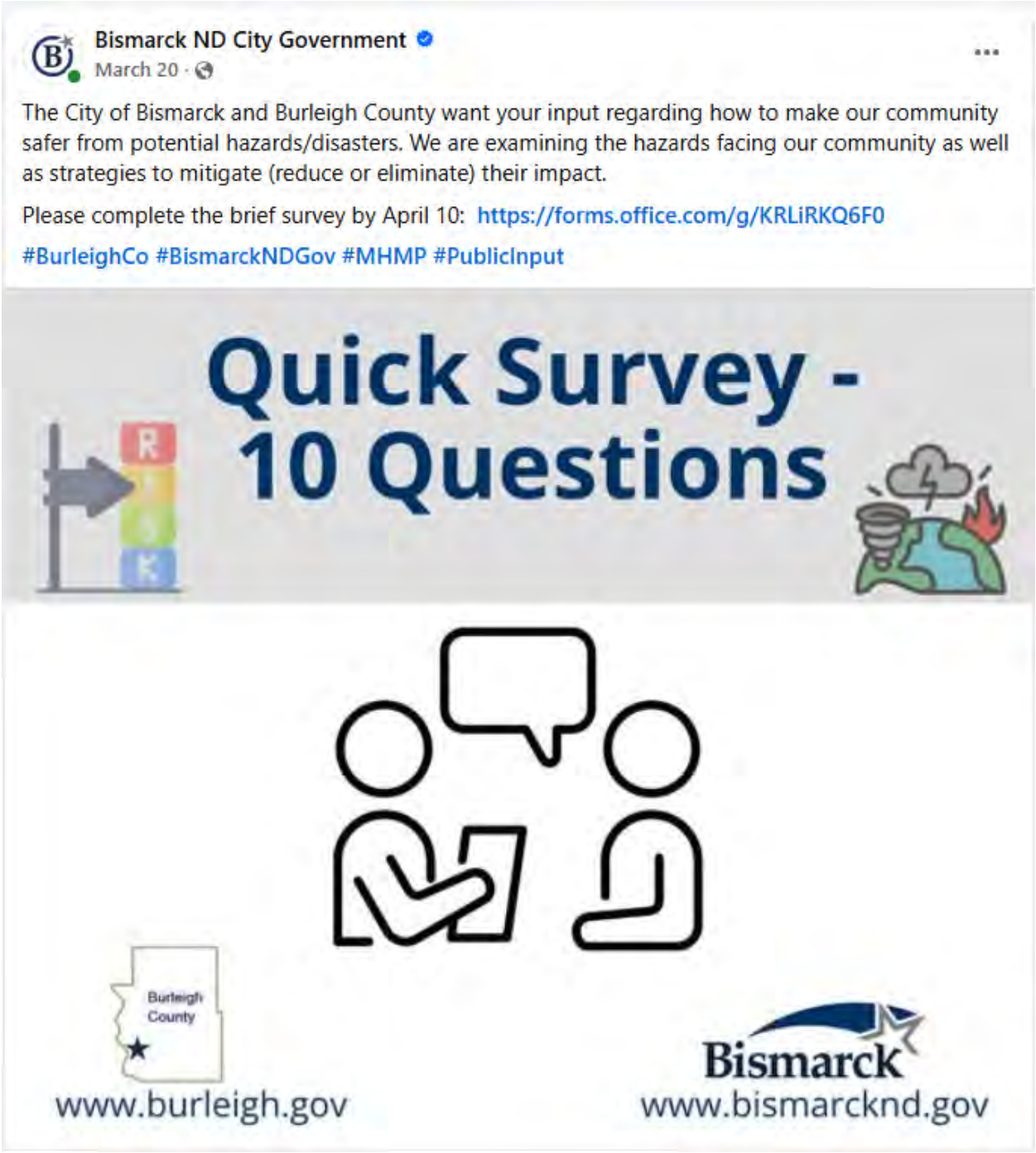


Burleigh County Twitter

Burleigh County Facebook



City of Bismarck Facebook



The Bismarck Tribune

A4 | FRIDAY, MARCH 21, 2025 DAKOTA BISMARCK TRIBUNE

DAKOTA BRIEFS

Burleigh hosting 3 special meetings

Burleigh County residents will have several opportunities outside of regularly scheduled County Commission meetings to weigh in on a proposal to change the auditor/treasurer position from elected to appointed.

The Commission will host two special public comment meetings in rural communities on Saturday. The first will be at 10 a.m. at Wilton Memorial Hall, 105 Dakota Ave., in Wilton. The second will be at 2 p.m. at the Sterling School, 118 McKenzie St., in Sterling.

Additionally, the Commission will host a special public comment meeting at 10 a.m. Saturday, March 29, in Bismarck. That meeting will be in the Tom Baker Meeting Room in the City/County Building, 221 N. Fifth St., in downtown Bismarck.

The Commission has already hosted public hearings during both regular meetings in March. An additional public hearing will be held during the April 7 regular meeting.

County residents who are unable to attend the public comment meetings can submit written comments on the Burleigh County website at https://bit.ly/4iZmcGD.

Fedorchak to hold telephone town hall

North Dakota's sole member in the U.S. House of Representatives will host a call-in town hall on Tuesday.

Republican U.S. Rep. Julie Fedorchak's office said the call will provide "thousands of North Dakotans the opportunity to engage in a productive discussion about the issues that matter most to them."

Fedorchak is a freshman member of Congress who ran last year for the spot after now-Gov. Kelly Armstrong opted to seek the governorship.

The call will take place at 6:30 p.m. on Tuesday. Residents who want to participate must sign up by 5 p.m. on Monday on Fedorchak's website. To register, go to https://bit.ly/4hpjGIs.

The event will be livestreamed on her official website and Facebook page.

Bismarck, Burleigh residents asked for mitigation plan input

Burleigh County and Bismarck are seeking community input regarding how to make the area safer from potential hazards and disasters.

Plans to mitigate potential hazards are approved by the Federal Emergency Management Agency and require an update every five years.

Area residents are asked to complete a questionnaire by April 10. It is available at https://bit.ly/4kWChi7.

— Bismarck Tribune staff reports

Dakota Media Access Television

BIG RIG 105.9 New Country Legends

DJS WHAT'S HAPPENING LOCAL GIG'S SOUND ADVICE BIG RIG LOCAL BIRTHDAYS

Bismarck Tribune

Mandan opens grass collection sites

Mandan Public Works has opened the city's grass and leaf collection sites.

Mar 21, 2025

Bismarck officials, symphony orchestra weigh future of Fourth of July event

Bismarck city officials are looking into ways to keep a popular Fourth of July celebration going after the construction of a new State Laboratory has caused some concerns.

Mar 21, 2025

Bismarck, Burleigh residents asked for input on local mitigation plan

Burleigh County and Bismarck are seeking community input regarding how to make the area safer from potential hazards and disasters.

Mar 20, 2025

Central ND News

Bismarck seeks public feedback for hazard mitigation plan update

GOVERNMENT

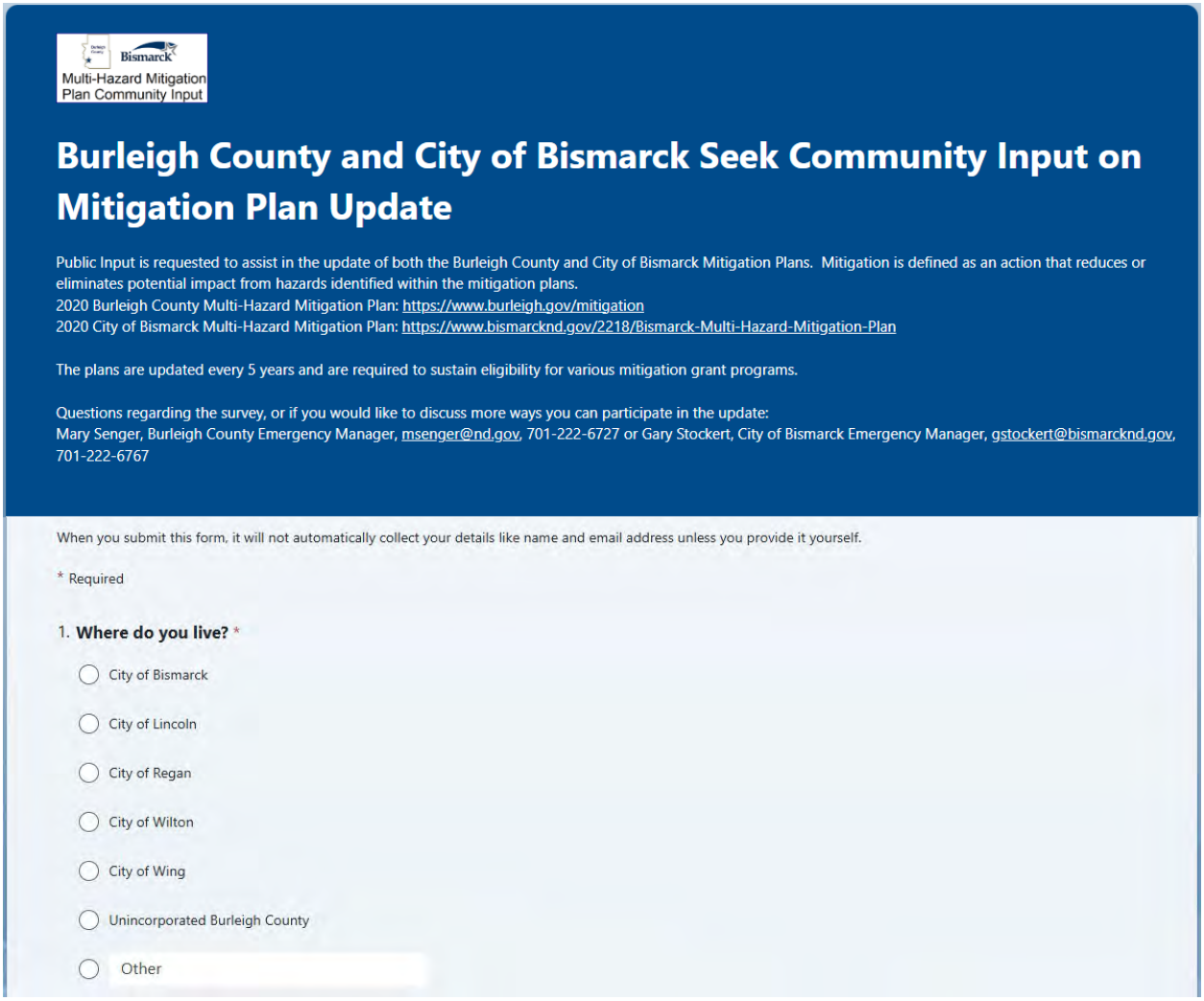
By Central ND News
Mar 26, 2025

The City of Bismarck, in collaboration with Burleigh County, is seeking community input to enhance safety measures against potential hazards and disasters. The current mitigation plans, approved by the Federal Emergency Management Agency, require updates every five years.

Residents are encouraged to participate by completing a short questionnaire available online at burleigh.gov and Bismarck Emergency Management. The deadline for submission is April 10th.

The initiative aims to create safer communities by reducing loss of life and property, enabling quicker recovery from disasters, and lessening the financial impact on individuals and communities.

Survey
(90 responses)



Multi-Hazard Mitigation Plan Community Input

Burleigh County and City of Bismarck Seek Community Input on Mitigation Plan Update

Public Input is requested to assist in the update of both the Burleigh County and City of Bismarck Mitigation Plans. Mitigation is defined as an action that reduces or eliminates potential impact from hazards identified within the mitigation plans.
2020 Burleigh County Multi-Hazard Mitigation Plan: https://www.burleigh.gov/mitigation
2020 City of Bismarck Multi-Hazard Mitigation Plan: https://www.bismarcknd.gov/2218/Bismarck-Multi-Hazard-Mitigation-Plan

The plans are updated every 5 years and are required to sustain eligibility for various mitigation grant programs.

Questions regarding the survey, or if you would like to discuss more ways you can participate in the update:
Mary Senger, Burleigh County Emergency Manager, msenger@nd.gov, 701-222-6727 or Gary Stockert, City of Bismarck Emergency Manager, gstockert@bismarcknd.gov, 701-222-6767

When you submit this form, it will not automatically collect your details like name and email address unless you provide it yourself.

* Required

1. **Where do you live?** *

- City of Bismarck
- City of Lincoln
- City of Regan
- City of Wilton
- City of Wing
- Unincorporated Burleigh County
- Other

2. **Select three hazards you feel are the highest threat to your area.** *

Please select at most 3 options.

- [ ] Civil Disturbance
- [ ] Criminal, Terrorist, or Nation/State Attack
- [ ] Cyberattack
- [ ] Dam Failure
- [ ] Drought
- [ ] Fire (including urban fire or and wildland fire)
- [ ] Flood (including riverine, levee failure, ice jam, and flash floods)
- [ ] Geologic Hazards (including landslide, abandoned land mines, expansive/unstable soils, environmental minerals, meteorite falls)
- [ ] Hazardous Materials Release
- [ ] Infectious Disease and Pest Infestations (including human, animal, and plant diseases)
- [ ] Severe Summer Weather (including downbursts, extreme heat, hail, lightning, high wind, and tornado)
- [ ] Severe Winter Weather (including blizzards, extreme cold/wind chill, heavy snow, ice storms, structure collapse)
- [ ] Space Weather
- [ ] Transportation Incident (including vehicular, railway, and aircraft accidents)

3. **What potential impacts concern you most relating to the hazards you selected above?**

Enter your answer

4. **What preventative measure(s) would you recommend for any of the hazards you selected above to minimize or eliminate the potential impacts?**

Enter your answer

5. **If you or a family member are considered an at-risk population (such as a senior citizen, individual with disabilities), what are your concerns during an incident?**

Enter your answer

6. **Is your home located in a floodplain?** *

- ◯ Yes
- ◯ No
- ◯ I don't know

7. **Do you have flood insurance?** *

- ◯ Yes
- ◯ No
- ◯ I don't know

8. **If "No," why not?**

- ◯ Not located in floodplain
- ◯ Too expensive
- ◯ Other

9. **What is the most effective way for you to receive information about how to make your home and area more resistant to hazards?** *

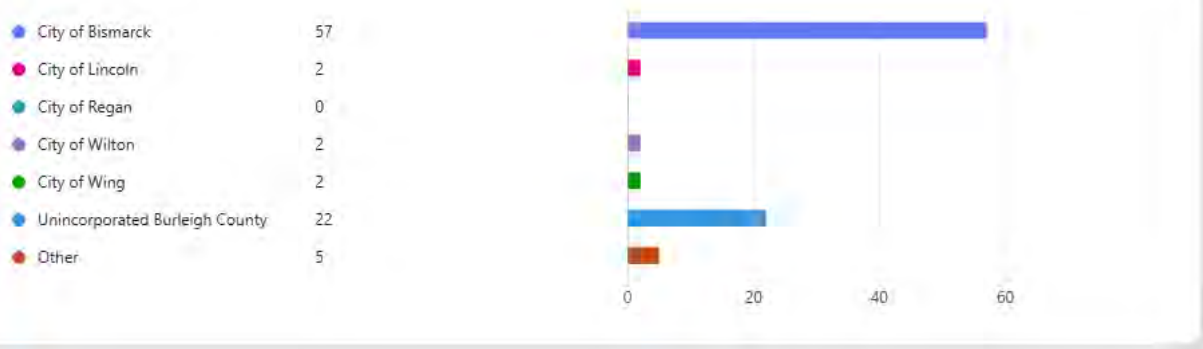
- ☐ Newspaper
- ☐ Television
- ☐ Radio
- ☐ Email
- ☐ Social Media
- ☐ Regular Mail
- ☐ Websites
- ☐ Other

10. **This survey may be submitted anonymously; however, if you provide us with your contact information (name, phone number, email), we will have the ability to follow up with you to learn more about your ideas or concerns (optional):**

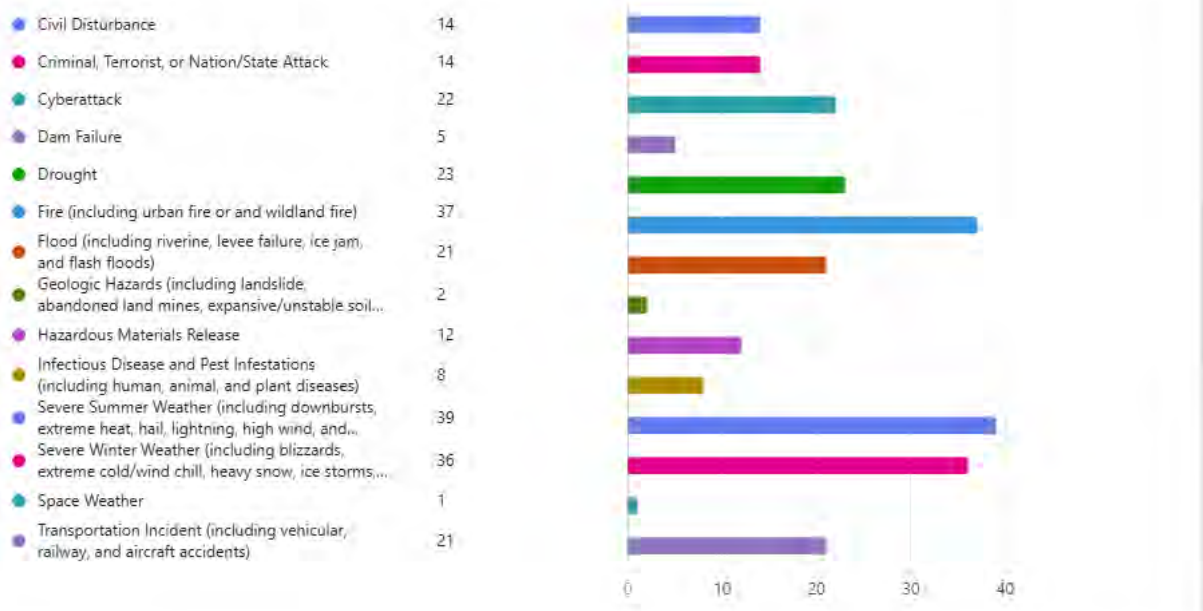
Enter your answer

Survey Results

1. **Where do you live?** More details



2. **Select three hazards you feel are the highest threat to your area.** More details



3. **What potential impacts concern you most relating to the hazards you selected above?** More details

74
Responses

Latest Responses
"Climate change makes weather more severe. We have large cottonwoods in our ya..."
"Grassfires and identity theft"
"Property damage"
...

4. **What preventative measure(s) would you recommend for any of the hazards you selected above to minimize or eliminat e the potential impacts?** More details

69
Responses

Latest Responses
"The army corps the act cautiously."
"Not sure, quick response to fires."
"Flood mitigation"
...

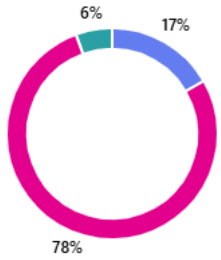
5. **If you or a family member are considered an at-risk population (such as a senior citizen, individual with disabilities), wha t are your concerns during an incident?** More details

56
Responses

Latest Responses
"We don't have any concerns"
"Emergency response teams arrival time"
...

6. **Is your home located in a floodplain?** More details

Yes	15
No	70
I don't know	5



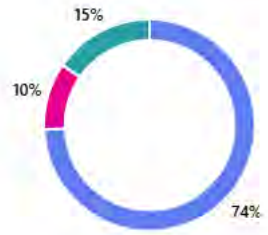
7. **Do you have flood insurance?** More details

Yes	8
No	81
I don't know	1

8. **If "No," why not?**

More details

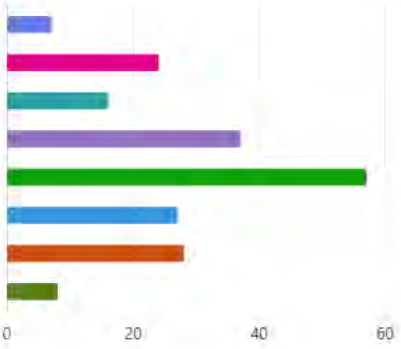
Not located in floodplain	58
Too expensive	8
Other	12



9. **What is the most effective way for you to receive information about how to make your home and area more resistant to hazards?**

More details

Newspaper	7
Television	24
Radio	16
Email	37
Social Media	57
Regular Mail	27
Websites	28
Other	8



10. **This survey may be submitted anonymously; however, if you provide us with your contact information (name, phone number, email), we will have the ability to follow up with you to learn more about your ideas or concerns (optional):**

More details

22
Responses

Latest Responses
"Marcia patrie mbpatrie73@gmail.com"
...

1. **Where do you live?**
   Majority from City of Bismarck, Unincorporate Burleigh County

2. **Select three hazards you feel are the highest threat to your area.**
   Severe Summer Weather, Fire, Severe Winter Weather

3. **What potential impacts concern you most relating to the hazards you selected above?**
   CO2 Pipeline and Release
   Cyber Attacks
   Disruption of Services
   Drought
   Fire
   Flooding
   Hazardous Materials
   Loss of Life
   Preparedness
   Property Damage

4. **What preventative measure(s) would you recommend for any of the hazards you selected above to minimize or eliminate the potential impacts?**
   Community Education
   Don't Allow C02 Pipeline
   Fire Restrictions
   Personal Preparedness
   Regulation (tighter)
   Tree Removal (waterway mgt)

5. **If you or a family member are considered an at-risk population (such as a senior citizen, individual with disabilities), what are your concerns during an incident?**
   Access/Functional Needs
   Air Quality
   Communication
   Education
   Elderly (neighbors, relatives)
   Utility Loss
   Water Quality

6. **Is your home located in a floodplain?**
   No – 70
   Yes – 15
   Don't Know - 5

7. **Do you have flood insurance?**
   No – 81
   Yes – 8
   Don't Know - 1

8. **If "No," why not?**
   Not located in floodplain, Too expensive

9. **What is the most effective way for you to receive information about how to make your home and area more resistant to hazards?**
   Social Media, Email

10. **This survey may be submitted anonymously; however, if you provide us with your contact information (name, phone number, email), we will have the ability to follow up with you to learn more about your ideas or concerns (optional).**