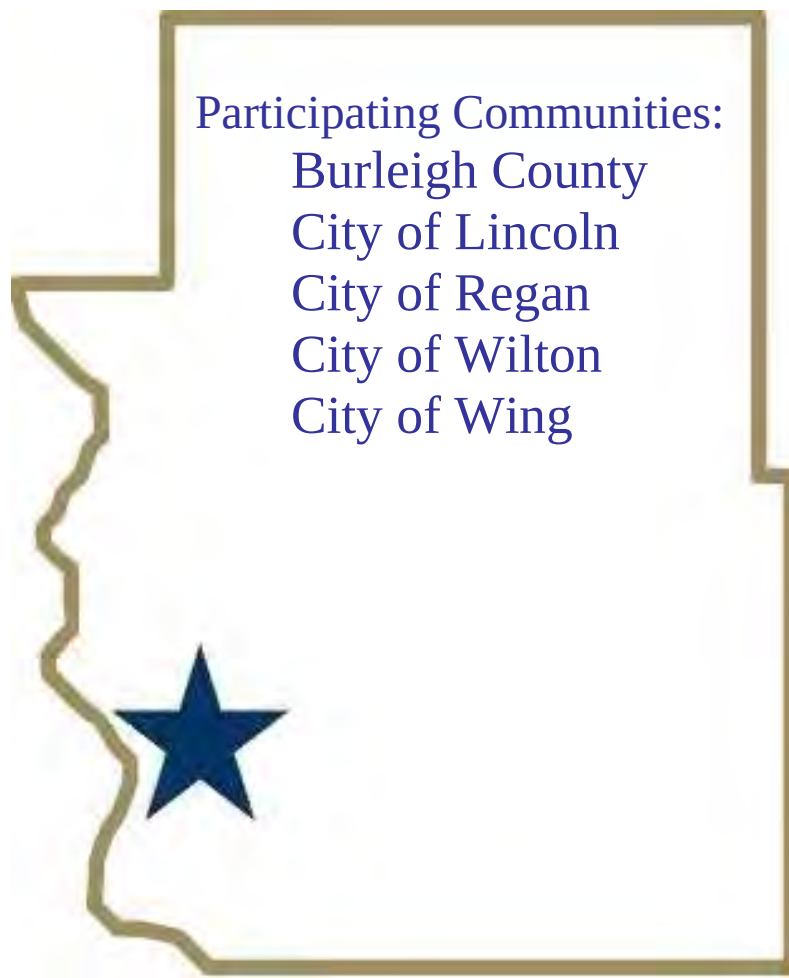


# Burleigh County Multi-Hazard Mitigation Plan



**FEMA Approved: April 29, 2026 – April 28, 2031**

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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**

| <b>Jurisdiction</b> | <b>Contact</b>          | <b>Title</b>                                | <b>Agency</b>                     |
|---------------------|-------------------------|---------------------------------------------|-----------------------------------|
| 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     | Crystallynn 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 of 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**

| <b>Jurisdictions Located within Burleigh County</b> | <b>Jurisdictions Asked to Participate in the Plan</b> | <b>Jurisdictions Represented in the Plan</b> | <b>Participation Status</b>                              |
|-----------------------------------------------------|-------------------------------------------------------|----------------------------------------------|----------------------------------------------------------|
| 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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                 |                                                                                     |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><b>Burleigh County</b><br/>221 N 5<sup>th</sup> St<br/>Bismarck ND 58501<br/>701.222.6718   burleigh.gov</p> |  |
| <p style="text-align: center;"><b>2025 Burleigh County Multi-Hazard Mitigation Plan</b></p> <p><b>Whereas</b> Burleigh County recognizes the threat that natural, man-made or technological hazards pose to people and property within Burleigh County; and</p> <p><b>Whereas</b> Burleigh County has prepared the 2025 “Burleigh County Multi-Hazard Mitigation Plan” in accordance with federal laws, including the <a href="#">Robert T. Stafford Disaster Relief and Emergency Assistance Act</a>, as amended; the <a href="#">National Flood Insurance Act of 1968</a>, as amended; and the <a href="#">National Dam Safety Program Act</a>, as amended; and</p> <p><b>Whereas</b> 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</p> <p><b>Whereas</b> adoption by Burleigh County demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2025 “Burleigh County Multi-Hazard Mitigation Plan”.</p> <p><b>Now, therefore, be it resolved, by the Burleigh County Commission, North Dakota, that:</b></p> <p>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.</p> <p>Signed this 17th day of November 2025</p> <p><br/>Brian Bitner, Chairperson<br/>Burleigh County Commission</p> |                                                                                                                 |                                                                                     |



**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, 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

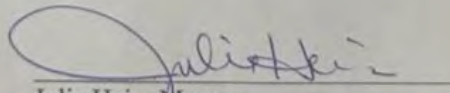
**Whereas** the 2025 “Burleigh County Multi-Hazard Mitigation Plan” identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Wing from the impacts of future hazards and disasters; and

**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 6<sup>th</sup> 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)                   | <ul style="list-style-type: none"> <li>• Shelter</li> <li>• Mass Care</li> <li>• Windshield Damage Assessment</li> <li>• Disaster Recovery</li> </ul>                                                                                                                                                                                                                                                                                                              |
| Bismarck Community Development                     | <ul style="list-style-type: none"> <li>• Plat Reviews</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| Bismarck/Burleigh Public Health                    | <ul style="list-style-type: none"> <li>• Shelters</li> <li>• Community Education</li> <li>• Vulnerable Populations</li> </ul>                                                                                                                                                                                                                                                                                                                                      |
| Burleigh County Auditor                            | <ul style="list-style-type: none"> <li>• Fiscal Management</li> <li>• Emergency Reserve Fund</li> </ul>                                                                                                                                                                                                                                                                                                                                                            |
| Burleigh County Board of Health                    | <ul style="list-style-type: none"> <li>• Public Health Programs</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                         |
| Burleigh County Building/Planning/Zoning           | <ul style="list-style-type: none"> <li>• Development</li> <li>• Floodplain Administration</li> <li>• Inspections</li> <li>• Planning</li> </ul>                                                                                                                                                                                                                                                                                                                    |
| Burleigh County Comprehensive Plan                 | <ul style="list-style-type: none"> <li>• Development</li> <li>• Planning</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |
| Burleigh County Commission                         | <ul style="list-style-type: none"> <li>• Disaster/Emergency Declarations</li> <li>• Budget Allocations</li> <li>• County Ordinances</li> </ul>                                                                                                                                                                                                                                                                                                                     |
| Burleigh County Community Wildfire Protection Plan | <ul style="list-style-type: none"> <li>• Fuel Loads</li> <li>• Mitigation Projects</li> </ul>                                                                                                                                                                                                                                                                                                                                                                      |
| Burleigh County Emergency Management               | <ul style="list-style-type: none"> <li>• Local Emergency Operations Plan</li> <li>• Multi-Hazard Mitigation Plan</li> <li>• Evacuation Annex</li> <li>• Shelter Annex</li> <li>• Mass Care Annex</li> <li>• Public Information Officer</li> <li>• Social Media Coordinator</li> <li>• Website Administrator</li> <li>• Disaster Recovery</li> <li>• Local Emergency Planning Committee</li> <li>• Grants Coordination</li> <li>• Emergency Notification</li> </ul> |

| Agency                                             | Plans and Programs                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burleigh County Emergency Management               | <ul style="list-style-type: none"> <li>• Local Emergency Operations Plan</li> <li>• Multi-Hazard Mitigation Plan</li> <li>• Evacuation Annex</li> <li>• Shelter Annex</li> <li>• Mass Care Annex</li> <li>• Public Information Officer</li> <li>• Social Media Coordinator</li> <li>• Website Administrator</li> <li>• Disaster Recovery</li> <li>• Local Emergency Planning Committee</li> <li>• Grants Coordination</li> <li>• Emergency Notification</li> </ul> |
| Burleigh County Extension Service                  | <ul style="list-style-type: none"> <li>• Animal Health</li> <li>• Plant Health</li> <li>• Community Education</li> </ul>                                                                                                                                                                                                                                                                                                                                           |
| Burleigh County GIS                                | <ul style="list-style-type: none"> <li>• Hazard Mapping</li> <li>• Online (public) Flood and Elevation Mapping Tool</li> </ul>                                                                                                                                                                                                                                                                                                                                     |
| Burleigh County Highway Department                 | <ul style="list-style-type: none"> <li>• Primary Routes</li> <li>• Bridges</li> <li>• Debris Removal</li> <li>• Self-Fill Sandbag Sites</li> </ul>                                                                                                                                                                                                                                                                                                                 |
| Burleigh County Local Emergency Planning Committee | <ul style="list-style-type: none"> <li>• Tier II Reporting</li> <li>• Community Education</li> <li>• Planning and Training</li> </ul>                                                                                                                                                                                                                                                                                                                              |
| Burleigh County Multi-Hazard Mitigation Plan       | <ul style="list-style-type: none"> <li>• Reviewed and updated</li> <li>• Mitigation projects reviewed for status</li> <li>• Mitigation projects developed</li> </ul>                                                                                                                                                                                                                                                                                               |
| Burleigh County Schools                            | <ul style="list-style-type: none"> <li>• Curriculum Standards (safety drills)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                           |
| Burleigh County School Superintendent              | <ul style="list-style-type: none"> <li>• Curriculum Standards (safety drills)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                           |
| Burleigh County Sheriff's Department               | <ul style="list-style-type: none"> <li>• Traffic Control and Safety</li> <li>• Evacuation Routes</li> <li>• Emergency Notification</li> </ul>                                                                                                                                                                                                                                                                                                                      |
| Burleigh County Snowmobile CERT                    | <ul style="list-style-type: none"> <li>• Alternate Transportation</li> <li>• Safety Checks</li> <li>• Planning and Training</li> </ul>                                                                                                                                                                                                                                                                                                                             |
| Burleigh County State's Attorney                   | <ul style="list-style-type: none"> <li>• Legal Review</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| Burleigh County Water Resource Board               | <ul style="list-style-type: none"> <li>• Permitted Uses</li> <li>• Planning Commission</li> <li>• Flood Protection Projects</li> </ul>                                                                                                                                                                                                                                                                                                                             |

| Agency                                              | Plans and Programs                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burleigh County Zoning Ordinance                    | <ul style="list-style-type: none"> <li>• Floodplain Management</li> <li>• South Central Regional Water Project</li> <li>• Missouri River Joint Water Resource</li> <li>• ND Flood Risk Management Study</li> </ul>                                                                                               |
| Central Dakota Amateur Radio Club                   | <ul style="list-style-type: none"> <li>• Alternate Communications</li> <li>• Weather Spotters</li> </ul>                                                                                                                                                                                                         |
| Central Dakota Communications Center (9-1-1)        | <ul style="list-style-type: none"> <li>• Alert and Warning</li> <li>• Communications</li> <li>• Emergency/Disaster Procedures</li> </ul>                                                                                                                                                                         |
| Crisis Care Chaplaincy                              | <ul style="list-style-type: none"> <li>• Mental Health</li> <li>• Disaster Recovery</li> </ul>                                                                                                                                                                                                                   |
| Lewis and Clark Regional Development Council        | <ul style="list-style-type: none"> <li>• Comprehensive Economic Development Strategy</li> </ul>                                                                                                                                                                                                                  |
| Lincoln City Attorney                               | <ul style="list-style-type: none"> <li>• Legal Review</li> </ul>                                                                                                                                                                                                                                                 |
| Lincoln City Commission                             | <ul style="list-style-type: none"> <li>• Disaster/Emergency Declarations</li> <li>• Budget Allocations</li> <li>• Building and Inspections</li> <li>• Capital Improvement Plan (under development)</li> <li>• City Ordinances</li> <li>• Comprehensive Plan</li> <li>• Planning and Zoning Commission</li> </ul> |
| Metropolitan Planning Organization                  | <ul style="list-style-type: none"> <li>• Hazardous Materials Route Mapping (In Progress)</li> <li>• Transportation Routes</li> <li>• Planning</li> </ul>                                                                                                                                                         |
| National Climatic Data Center (NCDC)                | <ul style="list-style-type: none"> <li>• Weather Event Statistics</li> </ul>                                                                                                                                                                                                                                     |
| National Fire and Incident Reporting System (NFIRS) | <ul style="list-style-type: none"> <li>• Fire Incident Statistics</li> </ul>                                                                                                                                                                                                                                     |
| ND Department of Agriculture                        | <ul style="list-style-type: none"> <li>• Plant and Animal Statistics</li> </ul>                                                                                                                                                                                                                                  |
| ND Department of Emergency Services                 | <ul style="list-style-type: none"> <li>• Enhanced Multi-Hazard Mitigation Plan</li> <li>• Review</li> <li>• Technical Assistance</li> </ul>                                                                                                                                                                      |
| ND Department of Health                             | <ul style="list-style-type: none"> <li>• Disease Statistics</li> </ul>                                                                                                                                                                                                                                           |
| ND Department of Transportation                     | <ul style="list-style-type: none"> <li>• Traffic Statistics</li> </ul>                                                                                                                                                                                                                                           |
| ND Forest Service                                   | <ul style="list-style-type: none"> <li>• Fire Incident Statistics</li> </ul>                                                                                                                                                                                                                                     |
| ND Pipeline Association                             | <ul style="list-style-type: none"> <li>• Maps</li> <li>• Education/Training</li> <li>• Planning and Zoning</li> </ul>                                                                                                                                                                                            |
| ND Water Resources                                  | <ul style="list-style-type: none"> <li>• Dam Inventory</li> <li>• NFIP Data</li> <li>• Water Basin Data</li> </ul>                                                                                                                                                                                               |



| Agency                                   | Plans and Programs                                                                                                                                                                                                                                                                             |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regan City Commission                    | <ul style="list-style-type: none"> <li>• Disaster/Emergency Declarations</li> <li>• Budget Allocations</li> <li>• City Ordinances</li> </ul>                                                                                                                                                   |
| Salvation Army                           | <ul style="list-style-type: none"> <li>• Canteen (mobile feeding)</li> <li>• Shelter</li> <li>• Mass Care</li> <li>• Windshield Damage Assessment</li> <li>• Disaster Recovery</li> </ul>                                                                                                      |
| South Central Regional Water             | <ul style="list-style-type: none"> <li>• Rural Water</li> <li>• Planning</li> </ul>                                                                                                                                                                                                            |
| Southwest Central Emergency Preparedness | <ul style="list-style-type: none"> <li>• Points of Distribution</li> <li>• Mass Inoculation</li> <li>• SWC Regional Strategic National Stockpile</li> <li>• SWC Regional EOP Mental Health</li> <li>• SWC Regional EOP Pandemic Influenza</li> <li>• SWC Regional EOP Mass Fatality</li> </ul> |
| US Army Corps of Engineers               | <ul style="list-style-type: none"> <li>• Planning Assistance (Section 22)</li> </ul>                                                                                                                                                                                                           |
| US Census                                | <ul style="list-style-type: none"> <li>• Demographics</li> <li>• Population Estimates</li> </ul>                                                                                                                                                                                               |
| US Drought Monitor                       | <ul style="list-style-type: none"> <li>• Drought Statistics</li> <li>• Maps</li> </ul>                                                                                                                                                                                                         |
| US Geological Survey                     | <ul style="list-style-type: none"> <li>• Creek/River Gages</li> </ul>                                                                                                                                                                                                                          |
| US National Weather Service              | <ul style="list-style-type: none"> <li>• Hazard Advisories</li> <li>• Outlooks</li> <li>• Statistics</li> <li>• Weather Advisories</li> </ul>                                                                                                                                                  |
| Wilton City Commission                   | <ul style="list-style-type: none"> <li>• Disaster/Emergency Declarations</li> <li>• Budget Allocations</li> <li>• City Ordinances</li> <li>• Planning and Zoning Board</li> </ul>                                                                                                              |
| Wing City Commission                     | <ul style="list-style-type: none"> <li>• Disaster/Emergency Declarations</li> <li>• Budget Allocations</li> <li>• City Ordinances</li> </ul>                                                                                                                                                   |



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.

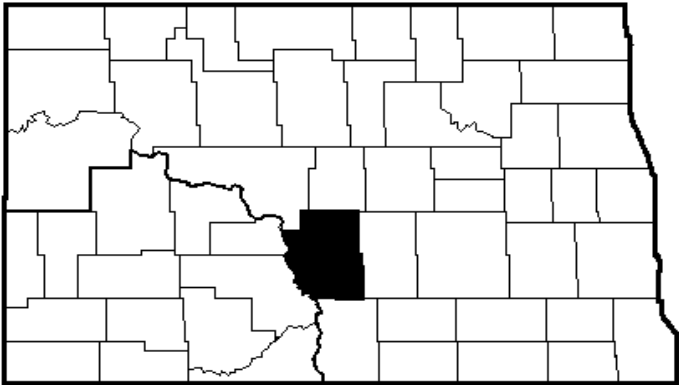
Burleigh County is pursuing participation in the Community Rating System which was not influenced by this plan as much as reducing insurance rates.

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

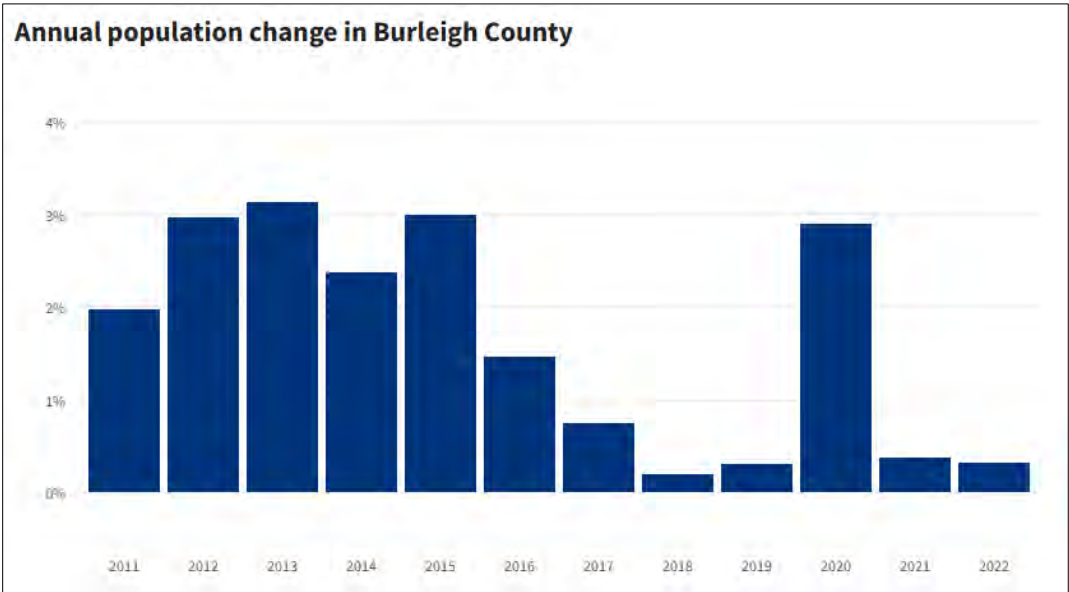
Burleigh County has 1,632.7 square miles of land area and is the 13<sup>th</sup> largest county in North Dakota by total area with a population of 98,458 ([US Census Bureau](#)). Residential and commercial development is concentrated in the incorporated areas of Burleigh County with the largest, single 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.



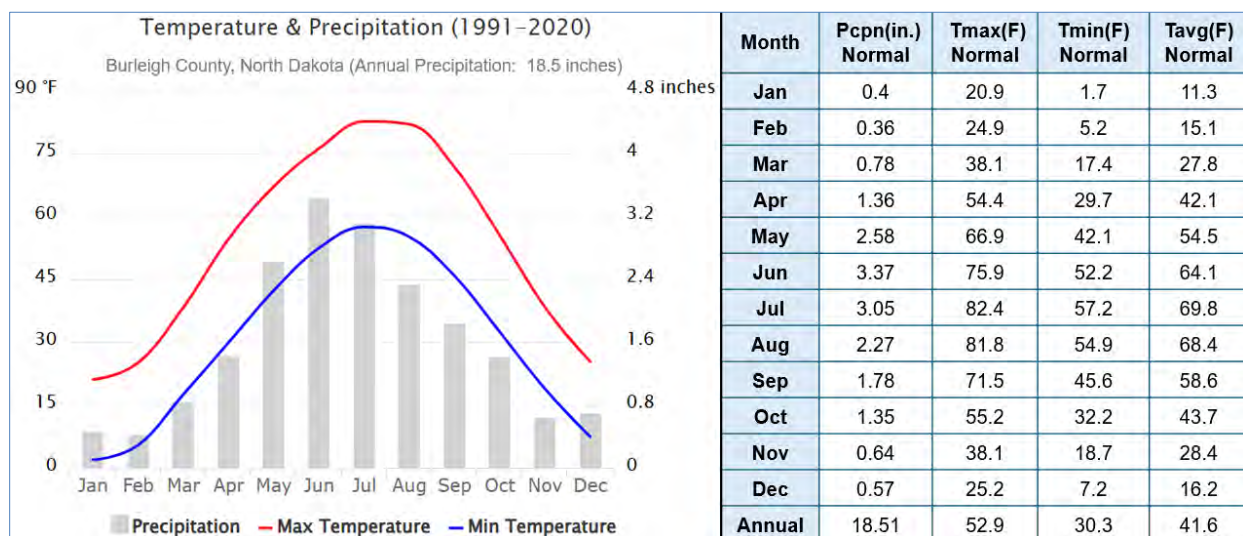
Source: [US Census Bureau](#)

## 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).

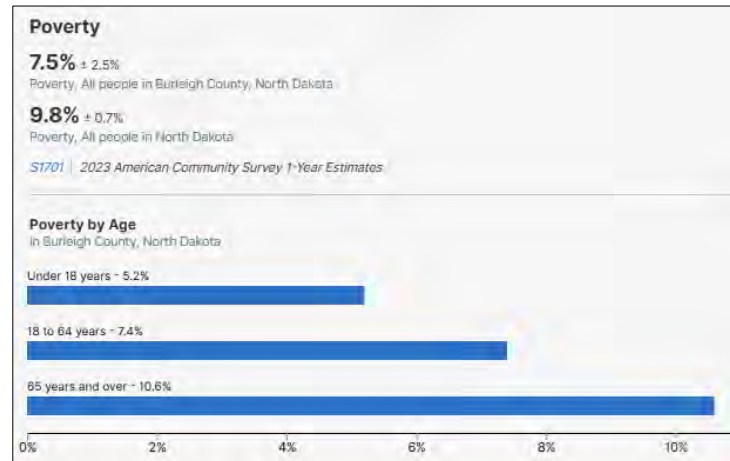


The figure above shows the average monthly precipitation and the range of monthly average high and low temperatures for the Burleigh County area during the most recent 30-year climate normal period, 1991-2020 ([XM-ACIS](#), 2025; [Climate Toolbox](#), 2024).

## 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](#)

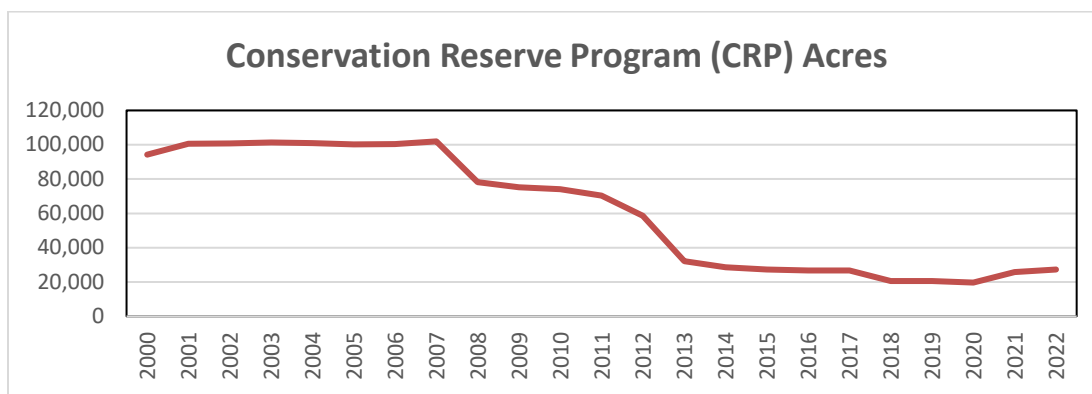


Source: [US Census Bureau 2023 American Community Survey](#)

## 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.

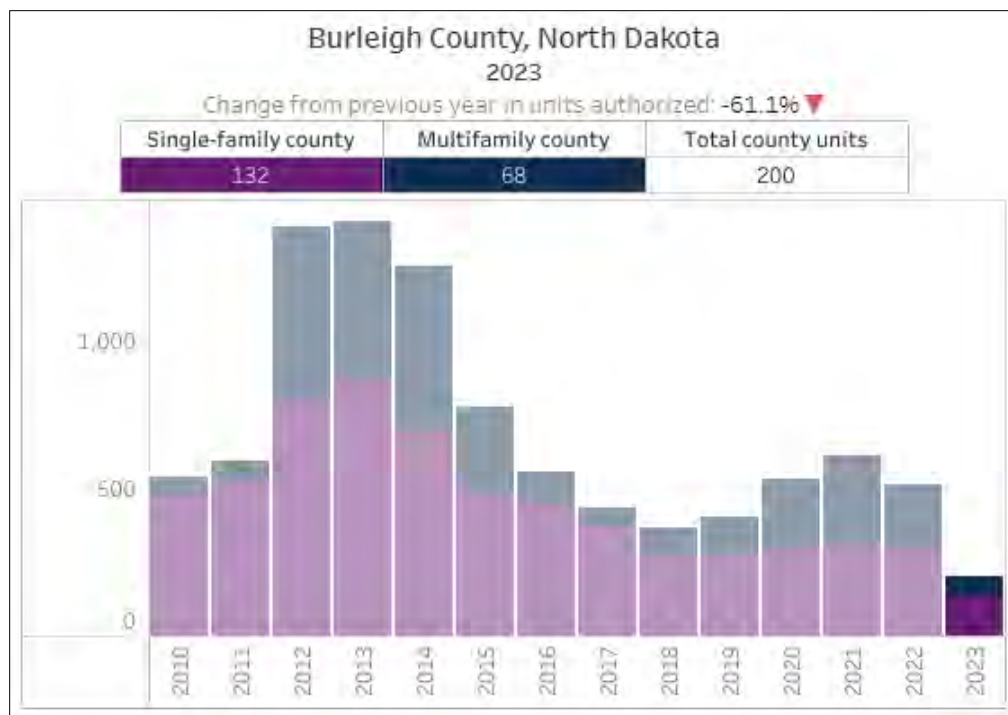
### Development

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 66<sup>th</sup> 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](#))

| <b>Natural Hazards</b>                  | <b>Technological Hazards</b> | <b>Human-Caused Incidents</b>    |
|-----------------------------------------|------------------------------|----------------------------------|
| 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.

| <b>Risk Assessment by Jurisdiction</b>     |                        |                |              |               |             |
|--------------------------------------------|------------------------|----------------|--------------|---------------|-------------|
| <b>Hazard</b>                              | <b>Burleigh County</b> | <b>Lincoln</b> | <b>Regan</b> | <b>Wilton</b> | <b>Wing</b> |
| 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.

| <b>Flood Vulnerabilities by Jurisdiction</b> |                        |                 |                |              |               |             |
|----------------------------------------------|------------------------|-----------------|----------------|--------------|---------------|-------------|
|                                              | <b>Burleigh County</b> | <b>Bismarck</b> | <b>Lincoln</b> | <b>Regan</b> | <b>Wilton</b> | <b>Wing</b> |
| 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 Rural 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

| <b>Hazardous Materials Release and Transportation Incident</b> |                            |                 |                |              |               |             |
|----------------------------------------------------------------|----------------------------|-----------------|----------------|--------------|---------------|-------------|
|                                                                | <b>Burleigh<br/>County</b> | <b>Bismarck</b> | <b>Lincoln</b> | <b>Regan</b> | <b>Wilton</b> | <b>Wing</b> |
| 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 by 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<br>Communication Towers<br>Information/Data/Record Centers<br>Media                                                                                           |
| Emergency Services     | Law<br>Fire<br>Emergency Medical Services (EMS)<br>ND National Guard<br>Public Safety Answering Points (PSAPs)/911 Centers<br>Public Works                                |
| Energy/Utility         | Electric Power Generation and Substations<br>Pipelines<br>Transmission Lines<br>Utility Companies<br>Water Distribution Systems<br>Water Towers<br>Water Treatment Plants |
| Financial Institutions | Banks<br>Credit Unions                                                                                                                                                    |
| Government             | Courthouses<br>Jails<br>Schools                                                                                                                                           |
| Industrial and Storage | Food Processing and/or Storage<br>Fuel<br>Health and Medical Supplies<br>Major Industries                                                                                 |
| Medical                | Clinics<br>Hospitals<br>Long-Term Care Facilities<br>Pharmacies                                                                                                           |
| Transportation         | Airports<br>Highways/Bridges<br>Railroads                                                                                                                                 |

**Hazards Excluded or Minimally Addressed in this Plan**

| <b>Hazard</b>                         | <b>Notes</b>                                                                                                                                                                                                                                                                   |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |

|                                                                                    |               |                                                                                      |         |          |              |
|------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------|---------|----------|--------------|
|  | Highly Likely | C                                                                                    | B       | A        | A            |
|                                                                                    | Likely        | C                                                                                    | C       | B        | A            |
|                                                                                    | Possible      | D                                                                                    | C       | B        | B            |
|                                                                                    | Unlikely      | D                                                                                    | D       | C        | C            |
|                                                                                    |               | Negligible                                                                           | Limited | Critical | Catastrophic |
|                                                                                    |               |  |         |          |              |

(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.

|                                |
|--------------------------------|
| <b>Hazard</b>                  |
| <b>Frequency:</b> _____        |
| <b>Severity:</b> _____         |
| <b>Risk Class:</b> _____       |
| <b>Seasonal Pattern:</b> _____ |
| <b>Duration:</b> _____         |
| <b>Speed of Onset:</b> _____   |

DESCRIPTION:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

IDENTIFIED IMPACTS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

HISTORY:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 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

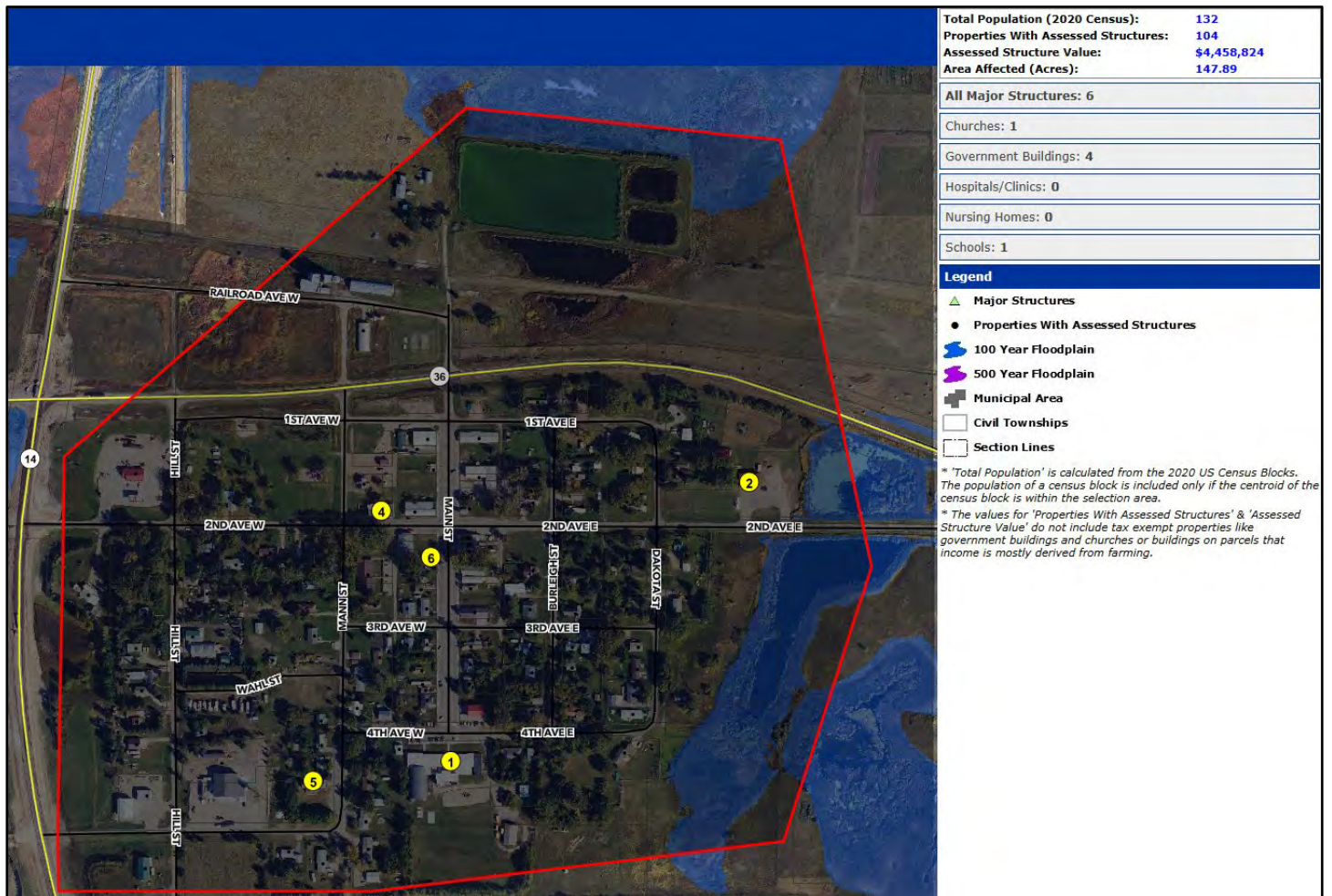
|                             |       | Very Likely                        | Likely         | Possible                                                                                                                                                                                  | Unlikely          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

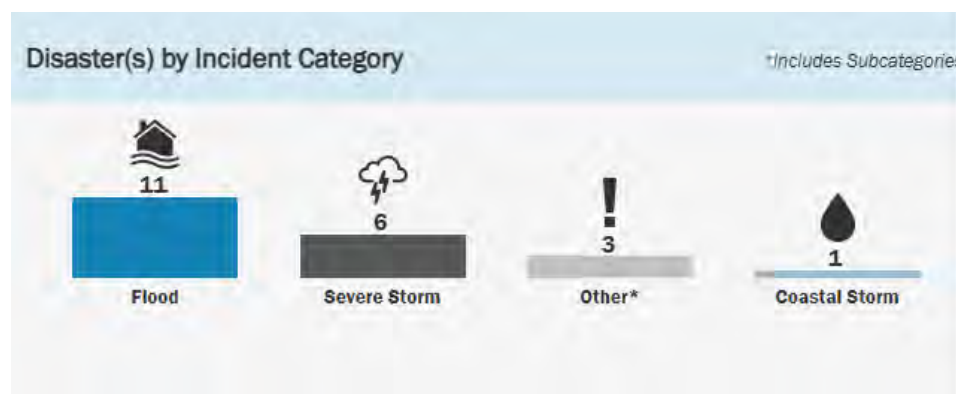
- Any geometric shape
- Population within the shape
- Critical infrastructure
- Properties with assessed structures
- Assessed structure values
- Breakdown of the major structure types

**Burleigh County Disaster Declarations**

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

**Burleigh County Emergency Declarations**

| Number               | Declared  | Description                  |
|----------------------|-----------|------------------------------|
| <a href="#">3477</a> | 3/13/2020 | COVID-19                     |
| <a href="#">3318</a> | 4/7/2011  | Flooding                     |
| <a href="#">3309</a> | 3/14/2010 | Flooding                     |
| <a href="#">3247</a> | 9/13/2005 | Hurricane Katrina Evacuation |
| <a href="#">3016</a> | 7/21/1976 | Drought                      |
| <a href="#">3012</a> | 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**

|                         |                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Frequency</b>        | Likely (10-100% probability in the next year, or at least 1 chance in next 10 years)                             |
| <b>Severity</b>         | Limited (10-25% of jurisdiction affected)                                                                        |
| <b>Risk Class</b>       | C                                                                                                                |
| <b>Seasonal Pattern</b> | None                                                                                                             |
| <b>Duration</b>         | Hours/Days                                                                                                       |
| <b>Speed of Onset</b>   | No warning                                                                                                       |
| <b>Location</b>         | Countywide                                                                                                       |
| <b>Impacts</b>          | 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**

|                         |                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Frequency</b>        | Possible (1-10% probability in next year, or at least 1 chance in next 100 years)                                                                                                                                                                                                                                                                               |
| <b>Severity</b>         | Limited (10-25% of jurisdiction affected)                                                                                                                                                                                                                                                                                                                       |
| <b>Risk Class</b>       | C                                                                                                                                                                                                                                                                                                                                                               |
| <b>Seasonal Pattern</b> | None                                                                                                                                                                                                                                                                                                                                                            |
| <b>Duration</b>         | Hours/Days                                                                                                                                                                                                                                                                                                                                                      |
| <b>Speed of Onset</b>   | No warning                                                                                                                                                                                                                                                                                                                                                      |
| <b>Location</b>         | Countywide                                                                                                                                                                                                                                                                                                                                                      |
| <b>Impacts</b>          | 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

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

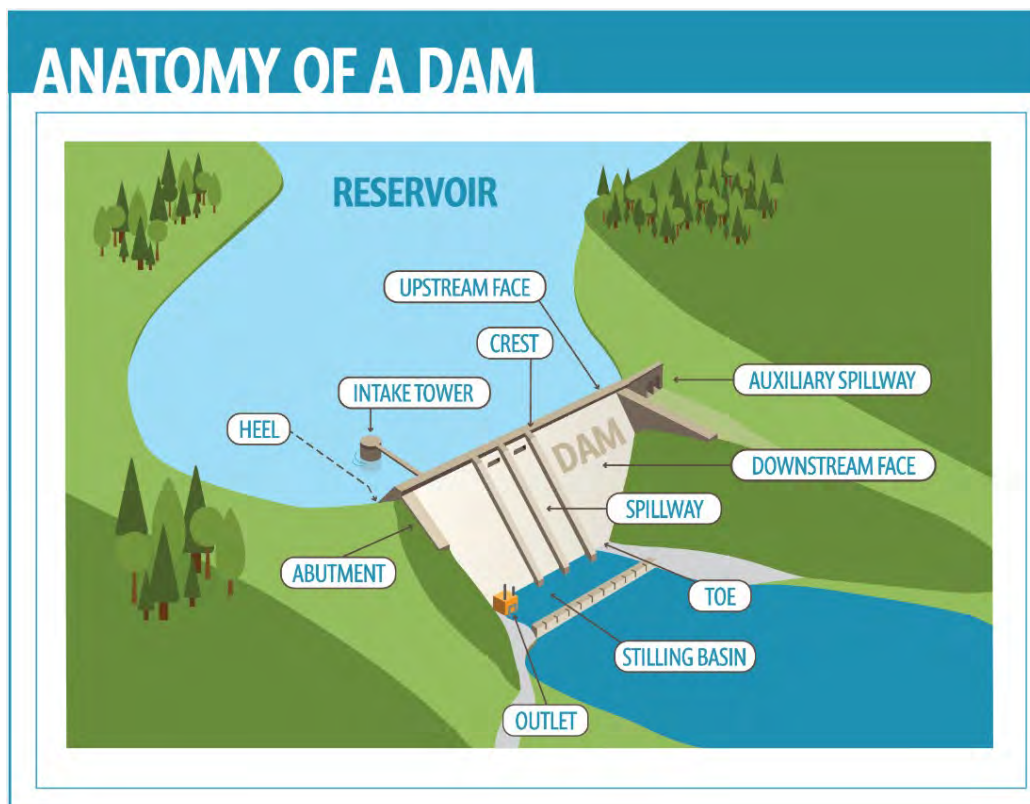
2016: During the Dakota Access Pipeline (DAPL) criminal protests, unknown individual(s) released personally identifying information of local officials and law enforcement officers who assisted in the protest response with the intent to have others harass and/or intimidate them or their families. This 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

|                         |                                                                                   |
|-------------------------|-----------------------------------------------------------------------------------|
| <b>Frequency</b>        | Possible (1-10% probability in next year, or at least 1 chance in next 100 years) |
| <b>Severity</b>         | Critical (25-50% of jurisdiction affected)                                        |
| <b>Risk Class</b>       | B                                                                                 |
| <b>Seasonal Pattern</b> | Spring/Summer                                                                     |
| <b>Duration</b>         | Days/Weeks                                                                        |
| <b>Speed of Onset</b>   | Little warning                                                                    |
| <b>Location</b>         | 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 |
|-----------------------------|------|----------|-----------------------------|---------------|--------------|
| <a href="#">14107604CA</a>  | Dam  | Intact   | Neideffer Flood Control Dam | Flood Control | Low          |
| <a href="#">13908032ABB</a> | Dam  | Intact   | Jackman Coulee Dam 1        | Flood Control | Low          |
| <a href="#">13908032ABC</a> | Dam  | Intact   | Jackman Coulee Dam 2        | Flood Control | High         |
| <a href="#">14307906CB</a>  | Dam  | Intact   | Aune Dam; Earl              | Flood Control | Undetermined |
| <a href="#">13908027ADA</a> | Dam  | Removed  | Hay Creek Overflow Dam      | Flood Control | Low          |
| <a href="#">13907927DC</a>  | Dam  | Intact   | McDowell Dam                | Recreation    | Significant  |
| <a href="#">14007605BC</a>  | Dam  | Intact   | Rice Lake Dam               | Recreation    | Low          |
| <a href="#">14207611AB</a>  | Dam  | Intact   | ND No Name Dam 122          | Recreation    | Low          |
| <a href="#">14108006CB</a>  | Dam  | Intact   | Lange Dam; Donald           | Recreation    | Undetermined |
| <a href="#">14307934D</a>   | Dam  | Breached | Quain Dam                   | Recreation    | Undetermined |

Source: [ND Department of Water Resources](#)

A wide-angle photograph of a golf course under a cloudy sky. A gravel path runs along the left side, bordered by a wire fence. The green grassy area is dotted with trees, and a small stream or drainage ditch is visible on the right side. In the background, there are buildings and more trees.

[illegible]

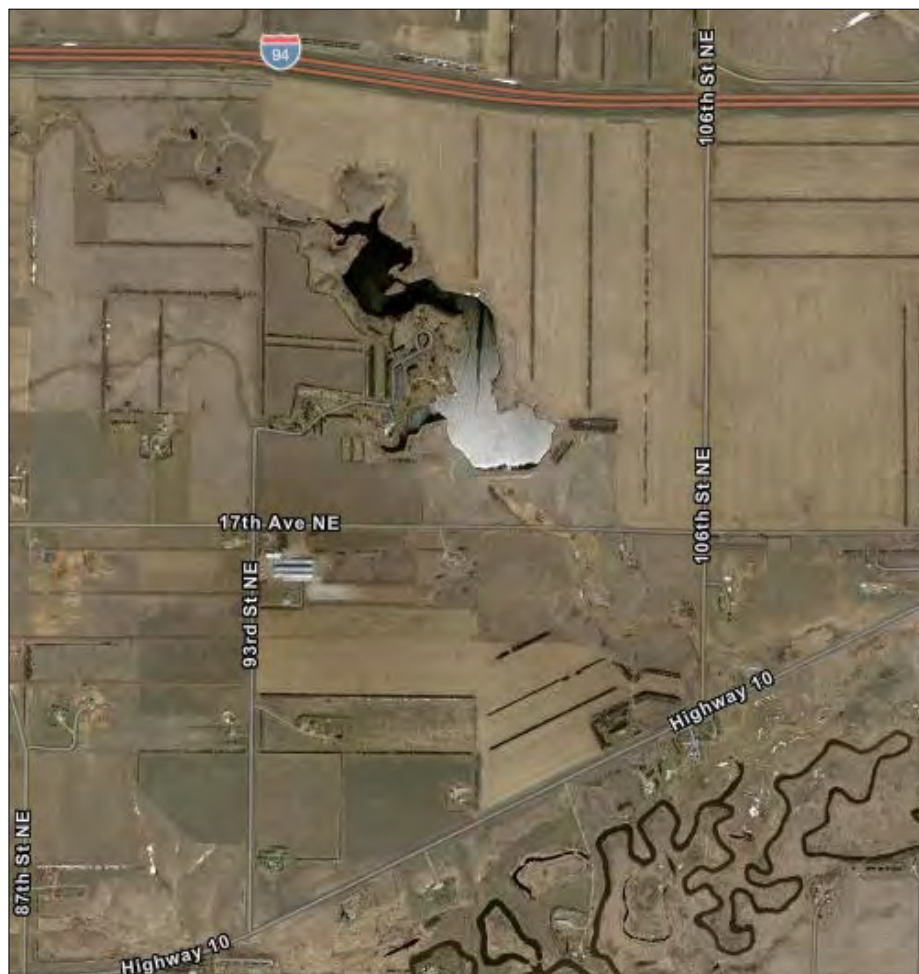
50



McDowell Dam is a recreation area located five miles east of Bismarck (1951 93<sup>rd</sup> 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.

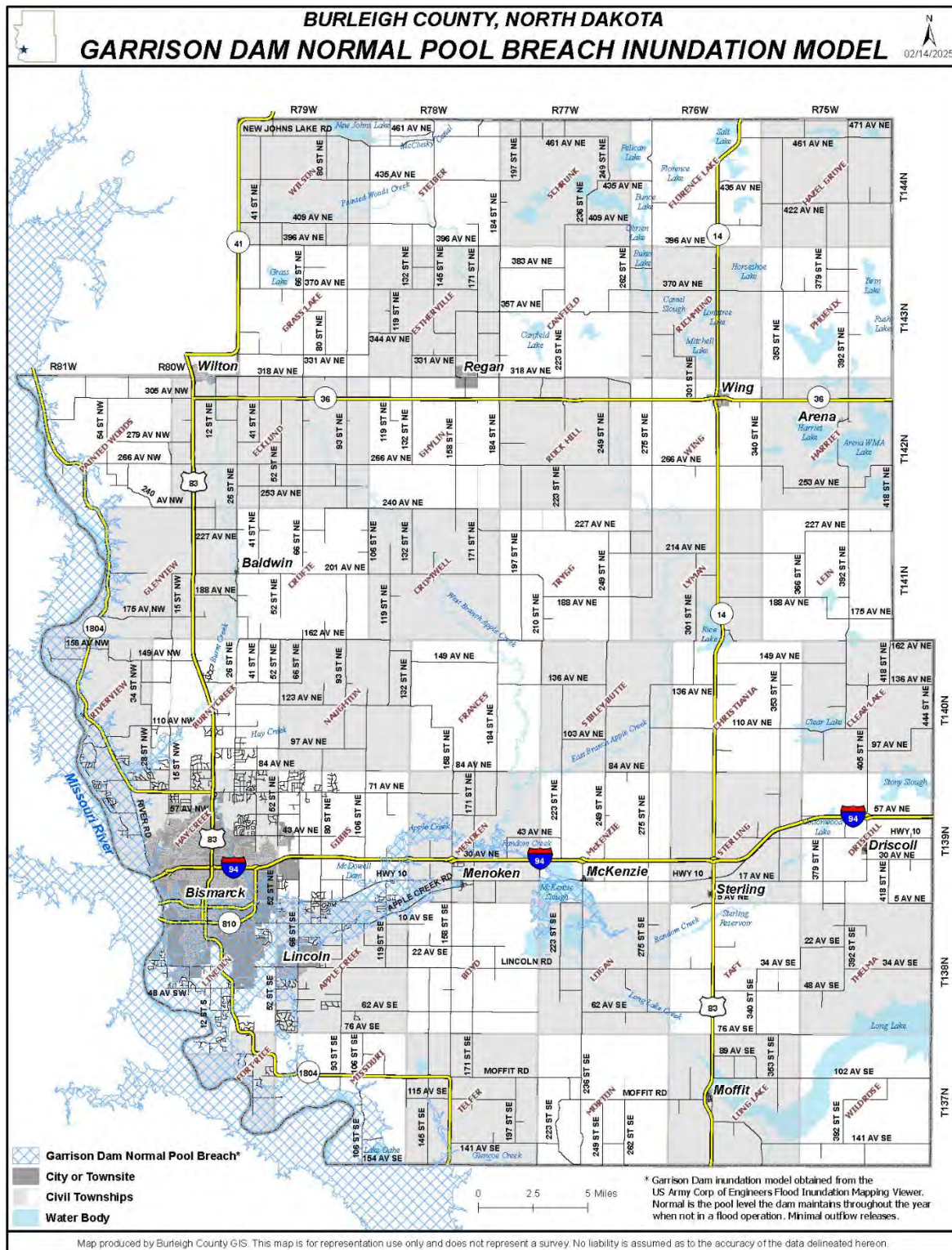


Source: [ND Department of Water Resources](#)



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](#))

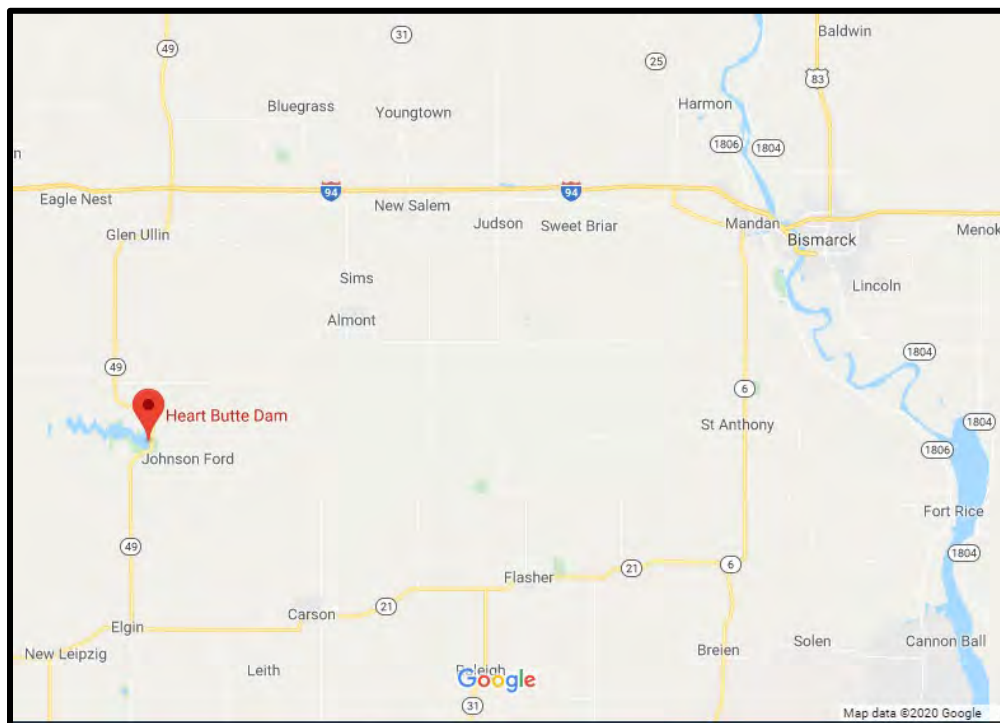
Any construction brings potential vulnerabilities. Burleigh County reviews project status updates and remains prepared through review and update of the [Burleigh County Flood Annex](#). Inundation maps with varying scenarios and specific locations of residents and infrastructure are provided in the [Burleigh 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

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

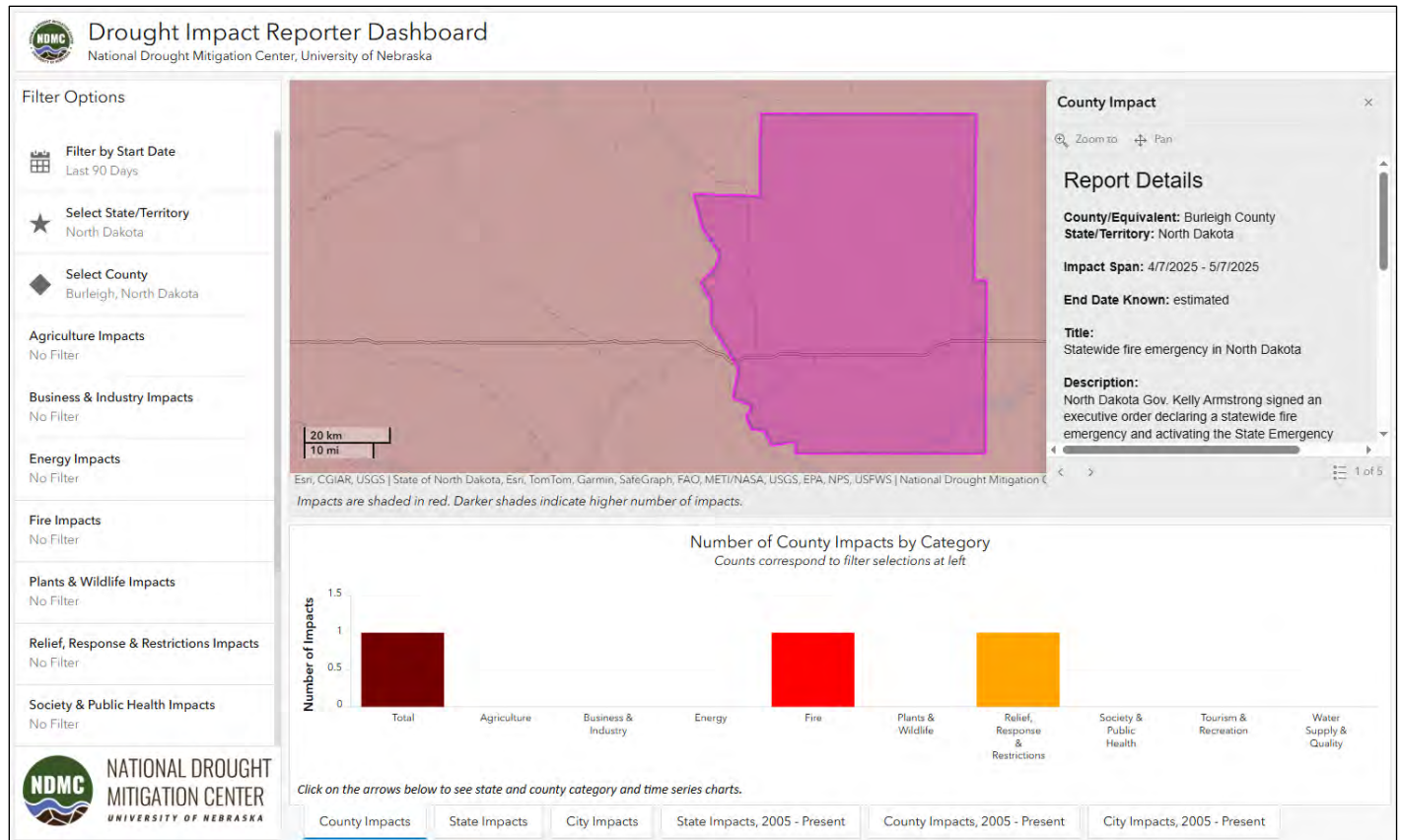
The [National Integrated Drought Information System](#) identifies types of drought:

- **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.

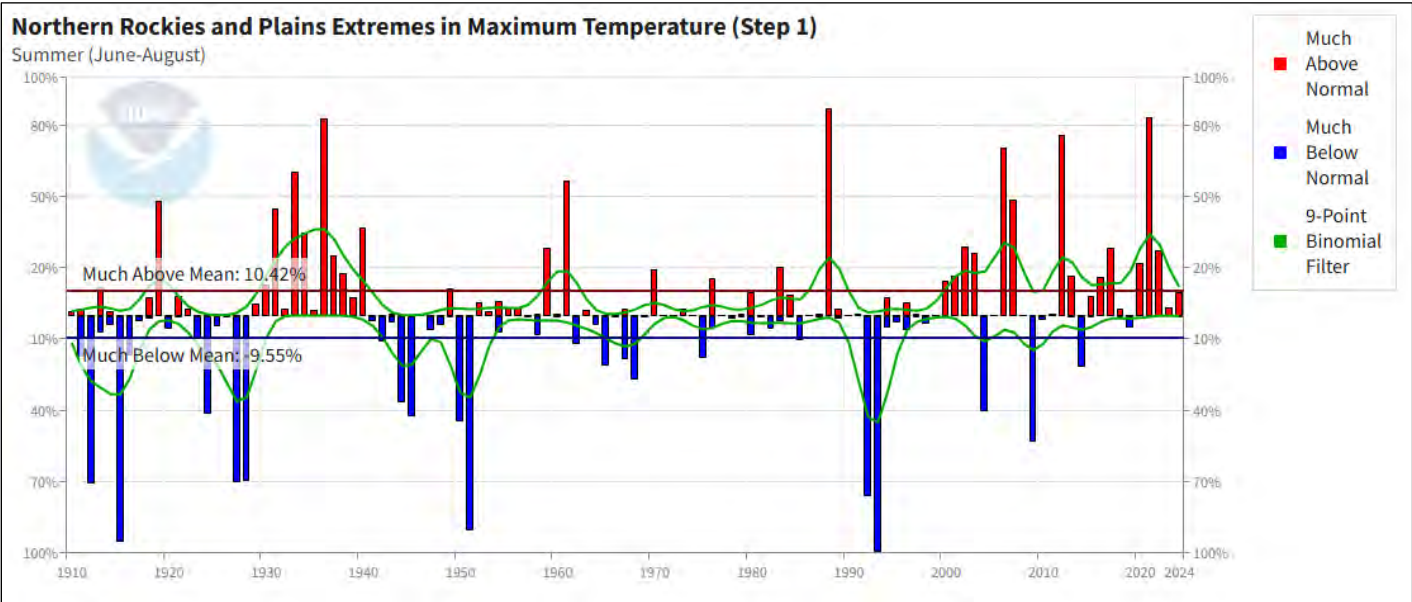
Excessive Heat

| Location                 | Date       | Type           | Dth | Inj | PrD   | CrD   |
|--------------------------|------------|----------------|-----|-----|-------|-------|
| <a href="#">BURLEIGH</a> | 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)

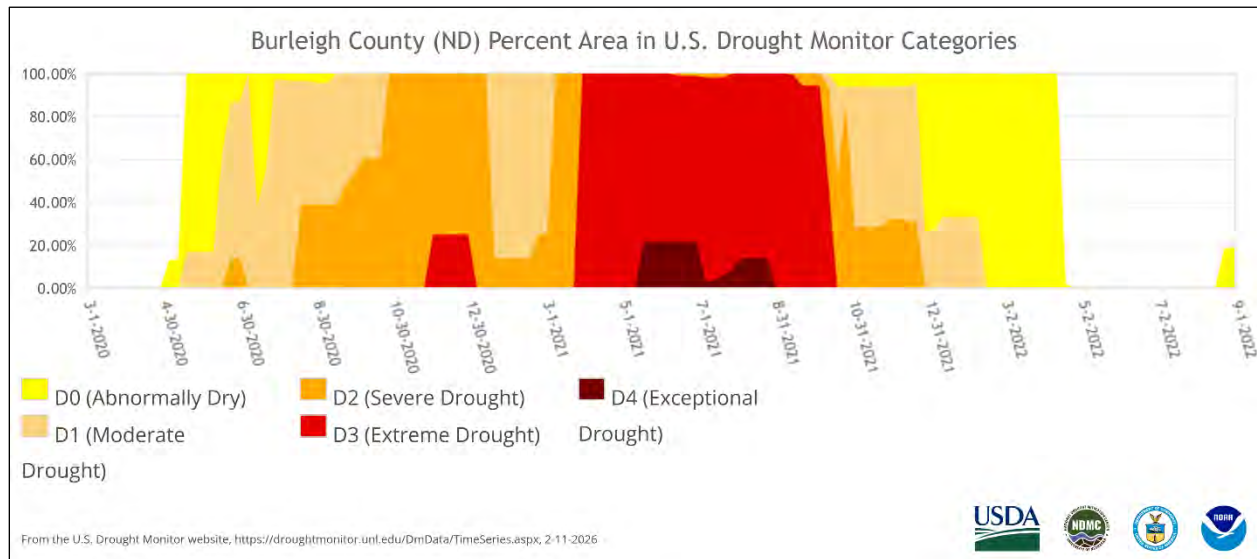
Extremes in maximum temperature for the period of Summer (June-August) from 1910-2024.



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](https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx)

**Fire**

(Including urban fire or structure collapse and wildland fire)

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

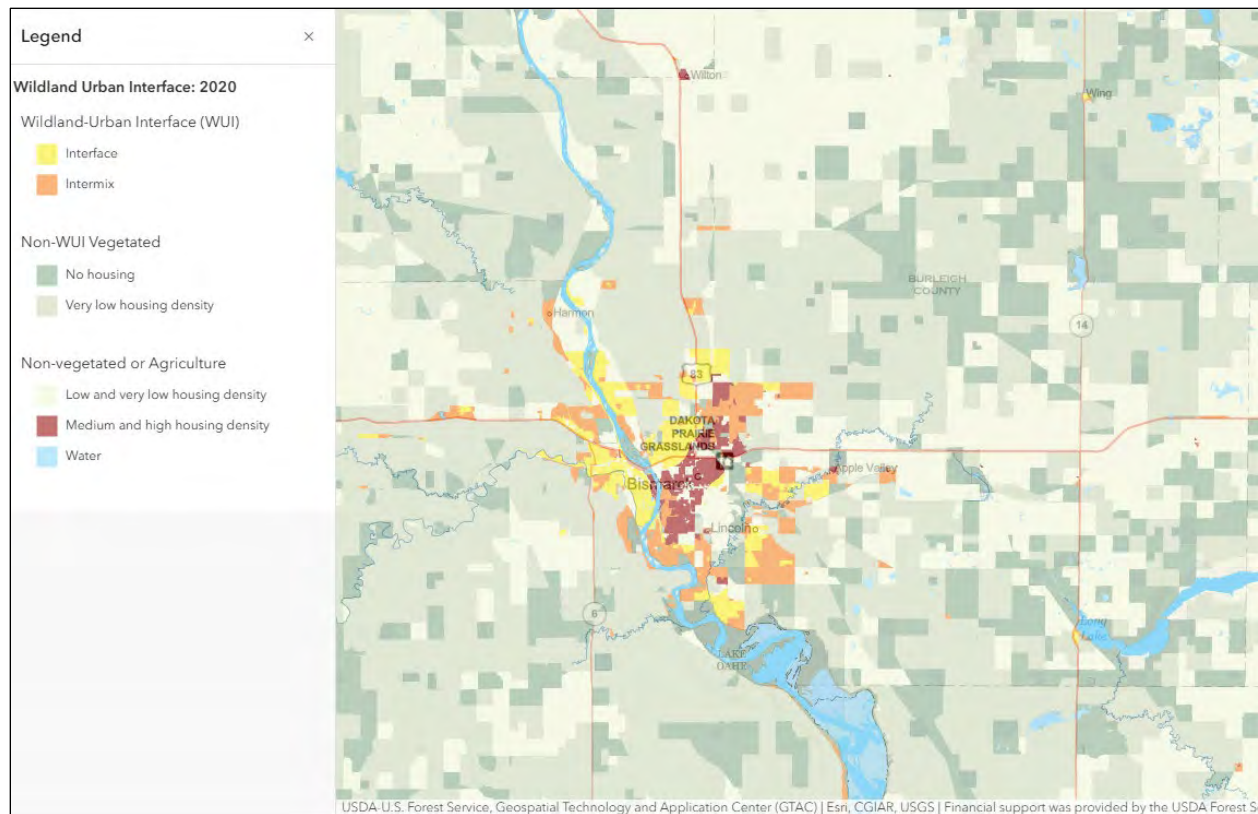
**Wildland Fire (Wildfire)**

“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.

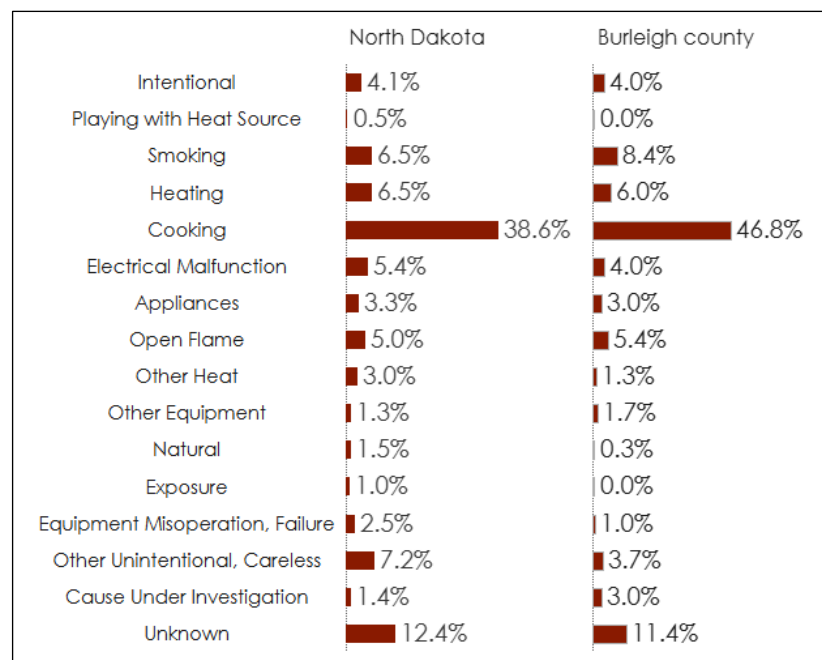


Bismarck Rural Fire Department extinguishing a scheduled burn which got out of control at Hawktree Golf Course northwest of Bismarck (Source: [The Bismarck Tribune](#), March 10, 2016).

### National Fire Incident Reporting System (NFIRS)

North Dakota reported 12,842 fires to the National Fire Incident Reporting System (NFIRS) between 2015 and 2019.

**Now**, select a county on the map to learn more about the types of fires reported in North Dakota.



Source: [www.fema.gov](http://www.fema.gov)



| <u>Location</u>           | <u>Date</u> | <u>Time</u> | <u>Type</u> | <u>Dth</u> | <u>Inj</u> | <u>PrD</u> | <u>CrD</u> |
|---------------------------|-------------|-------------|-------------|------------|------------|------------|------------|
| <a href="#">BURLEIGH</a>  | 04/12/2015  | 17:00       | Wildfire    | 0          | 0          | 200.00K    | 0.00K      |
| <a href="#">BURLEIGH</a>  | 07/18/2006  | 14:00       | Wildfire    | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a>  | 04/08/2005  | 14:00       | Wildfire    | 0          | 3          | 0.00K      | 0.00K      |
| <a href="#">BISMARCK</a>  | 04/09/2003  | 14:14       | Wildfire    | 0          | 1          | 0.00K      | 0.00K      |
| <a href="#">MC KENZIE</a> | 03/24/2003  | 13:35       | Wildfire    | 0          | 0          | 0.00K      | 0.00K      |
| <b>Totals:</b>            |             |             |             | 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 249<sup>th</sup> St).



## Flood

(Including riverine, overland, and flash floods)

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

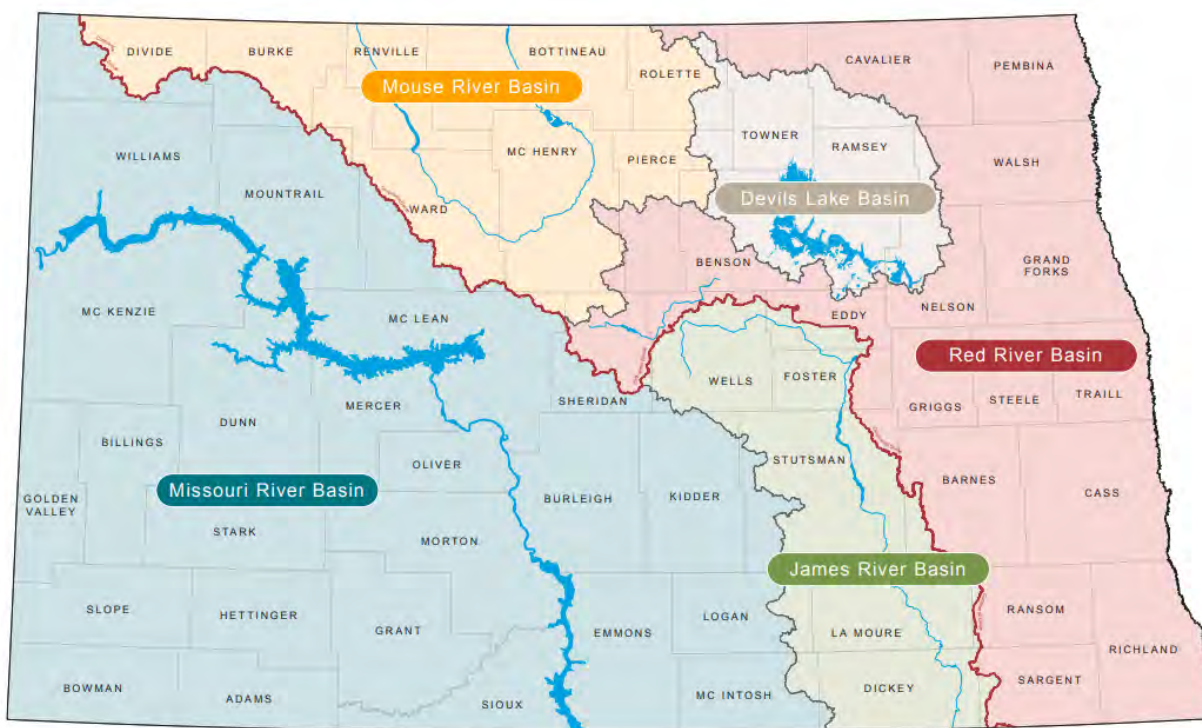
#### Missouri River Basin

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):

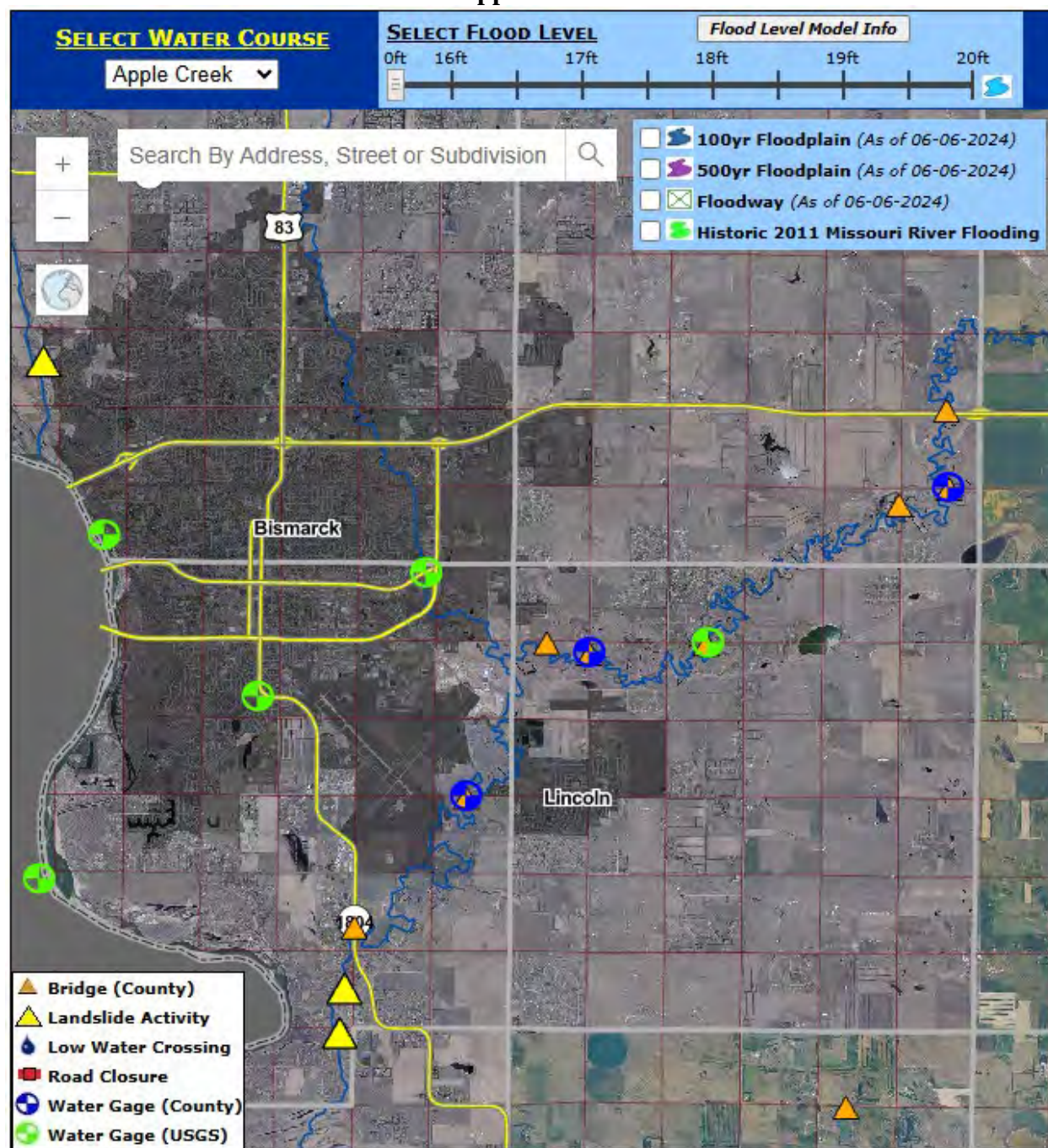
- Apple Creek
- Burnt Creek
- Grande Prairie Watersheds (Remmick, Grande Prairie Estates, Wachter)
- Hay Creek and North Valley Tributary
- Jackman Coulee
- Landfill Watershed
- Missouri River
- North 4th Street Watershed
- North Washington Street Watershed



## 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/>

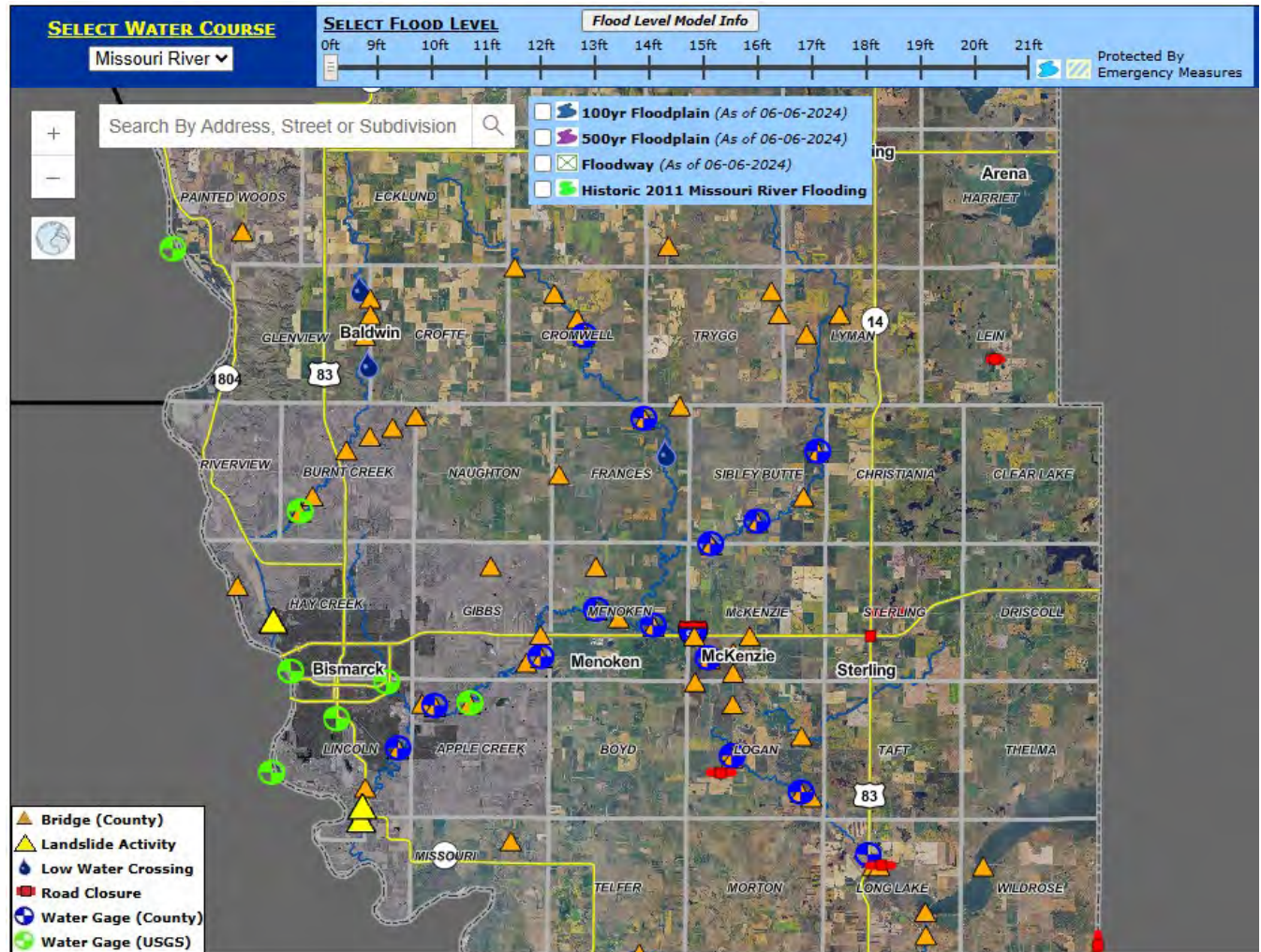
### Apple Creek



Source: [Burleigh County Website](https://www.burleighco.com/maps/apple-creek-flood-mapping/)



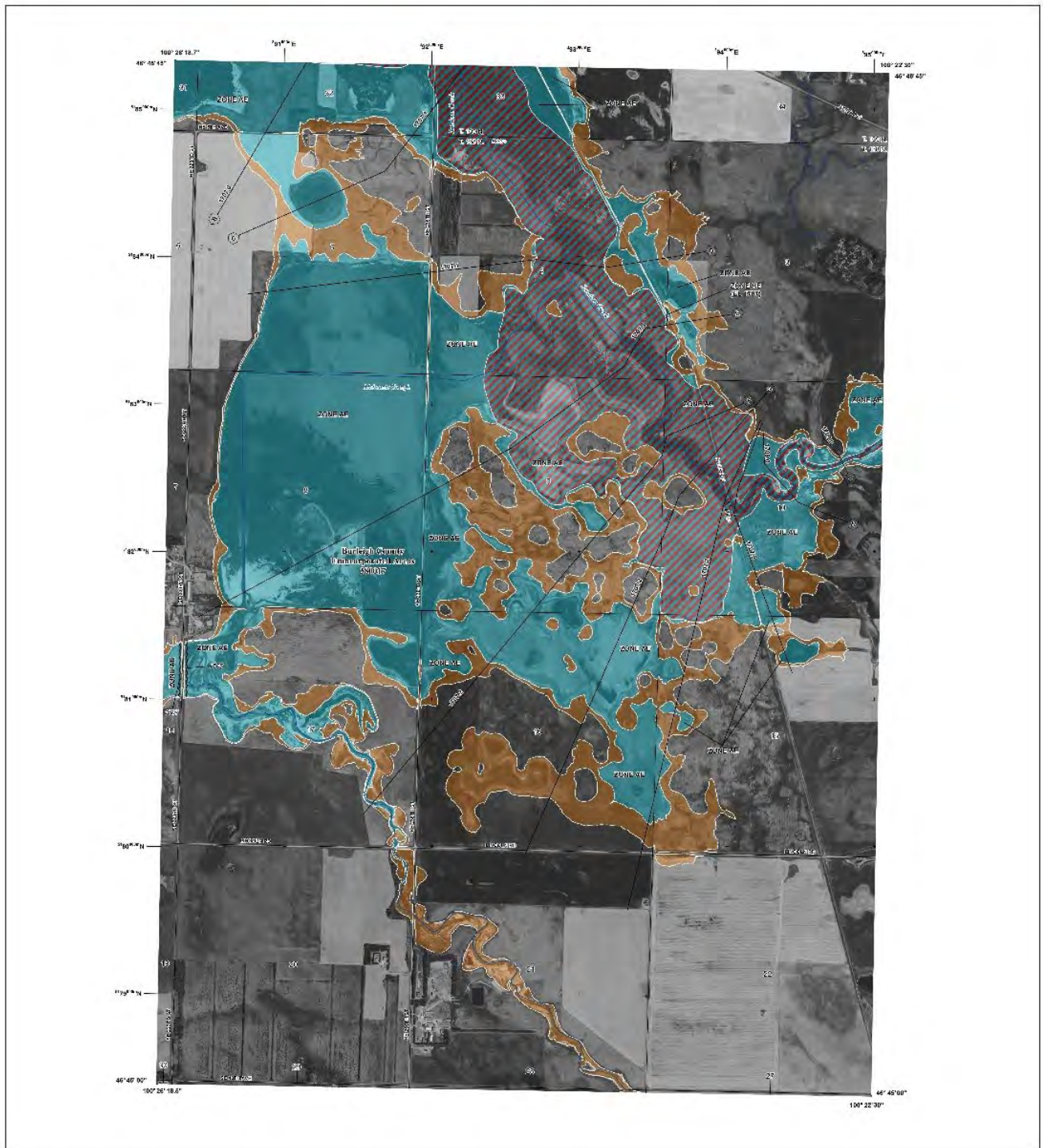
## Missouri River

Source: [Burleigh County Website](#)

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**

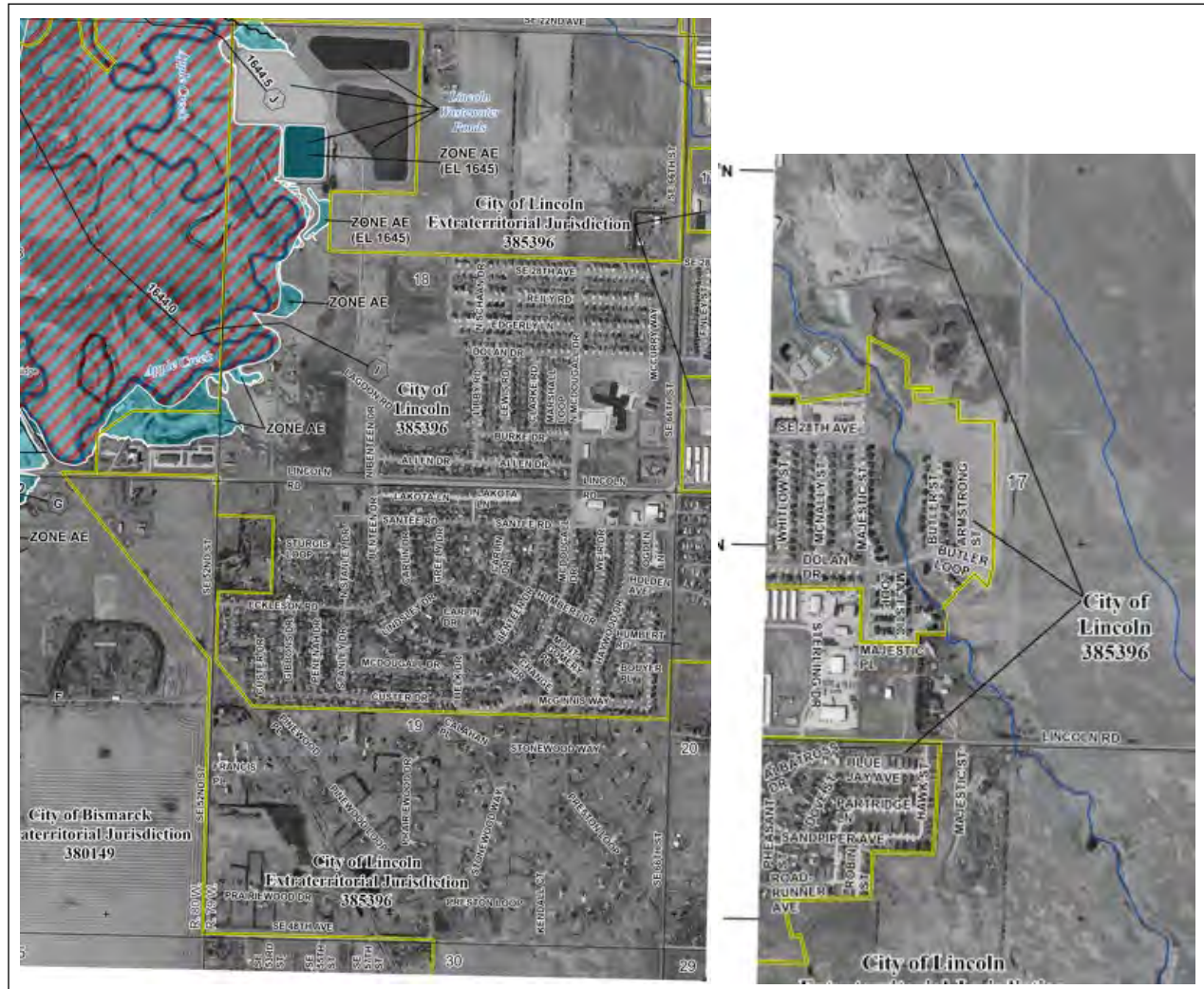
Burleigh County has 43 Flood Insurance Rate Map Panels

Source: [FEMA Map Service Center](https://www.fema.gov/flood-insurance-rate-map-service-center)

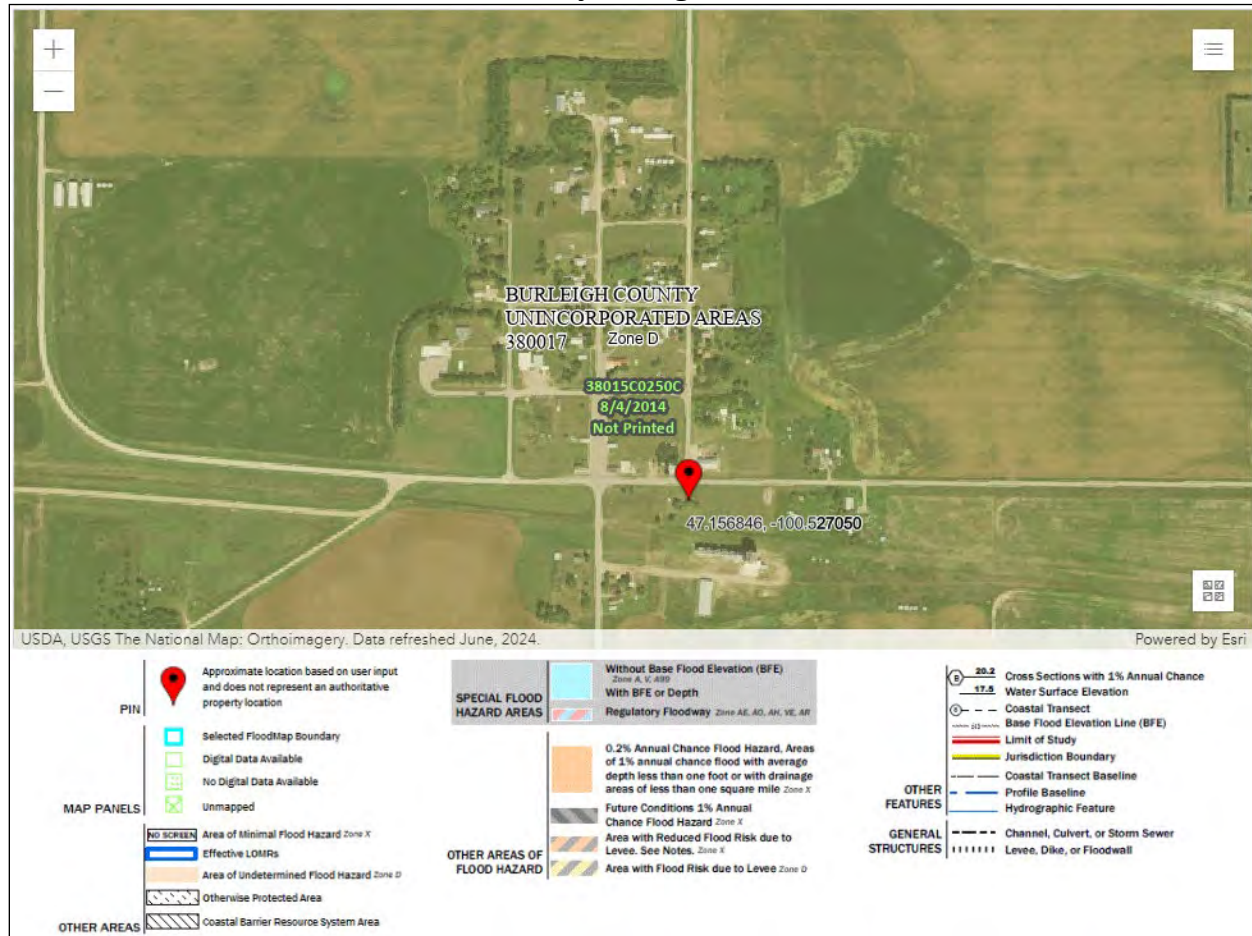
County Map also shown in Attachments



## City of Lincoln

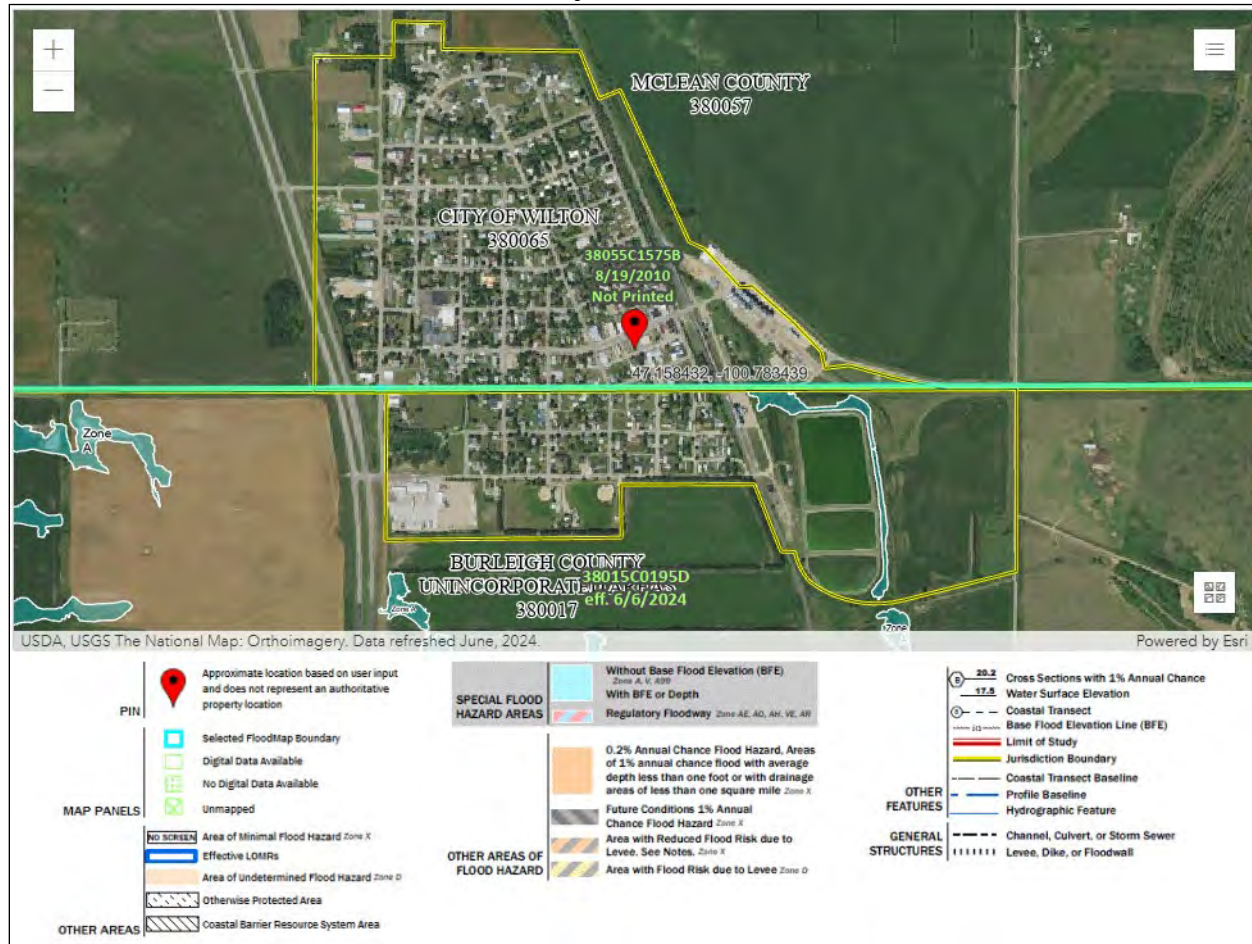
Source: [FEMA Map Service Center](#)

## City of Regan

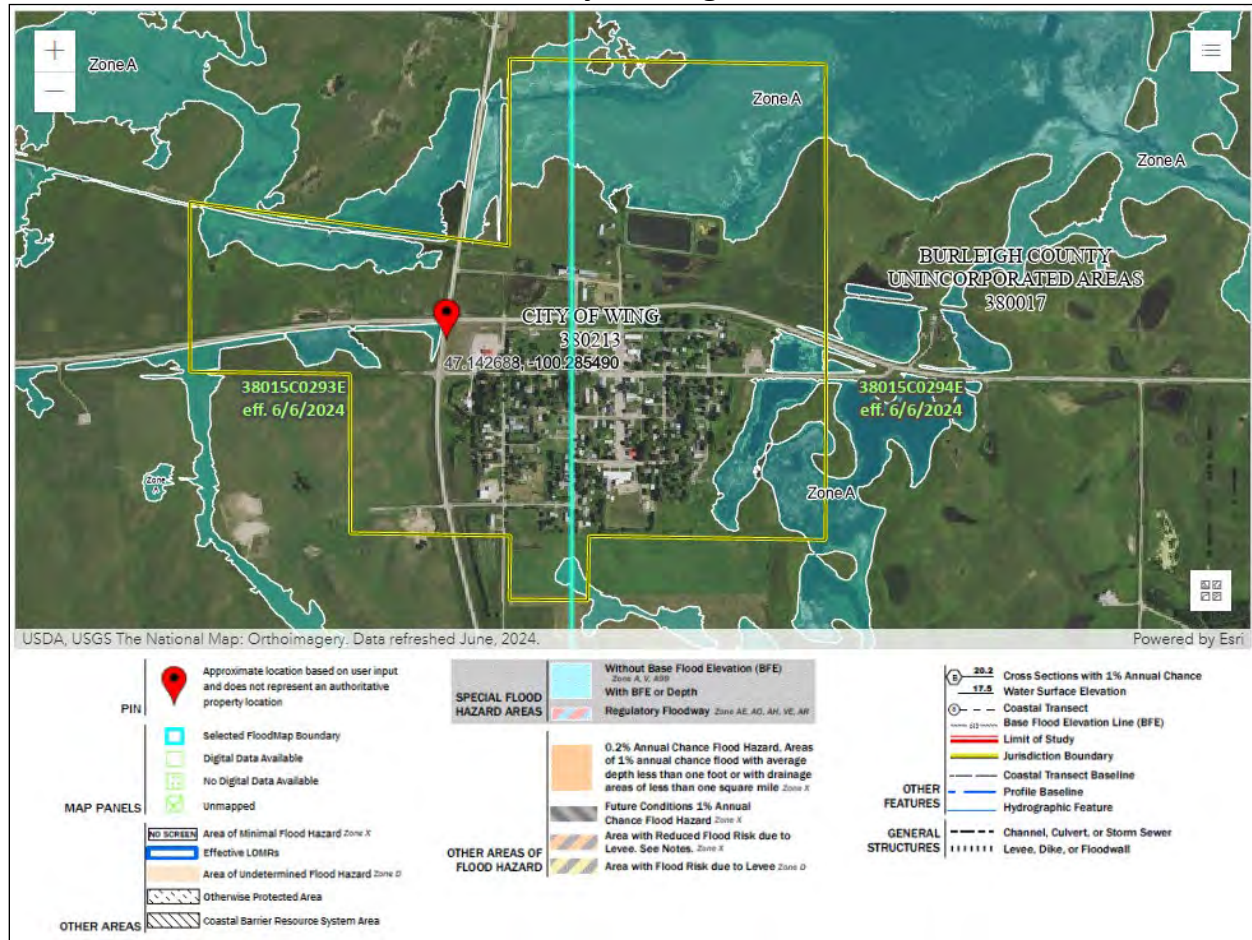
Source: [FEMA Map Service Center](https://www.fema.gov/flood-maps)



## City of Wilton

Source: [FEMA Map Service Center](https://www.fema.gov/map-service-center)

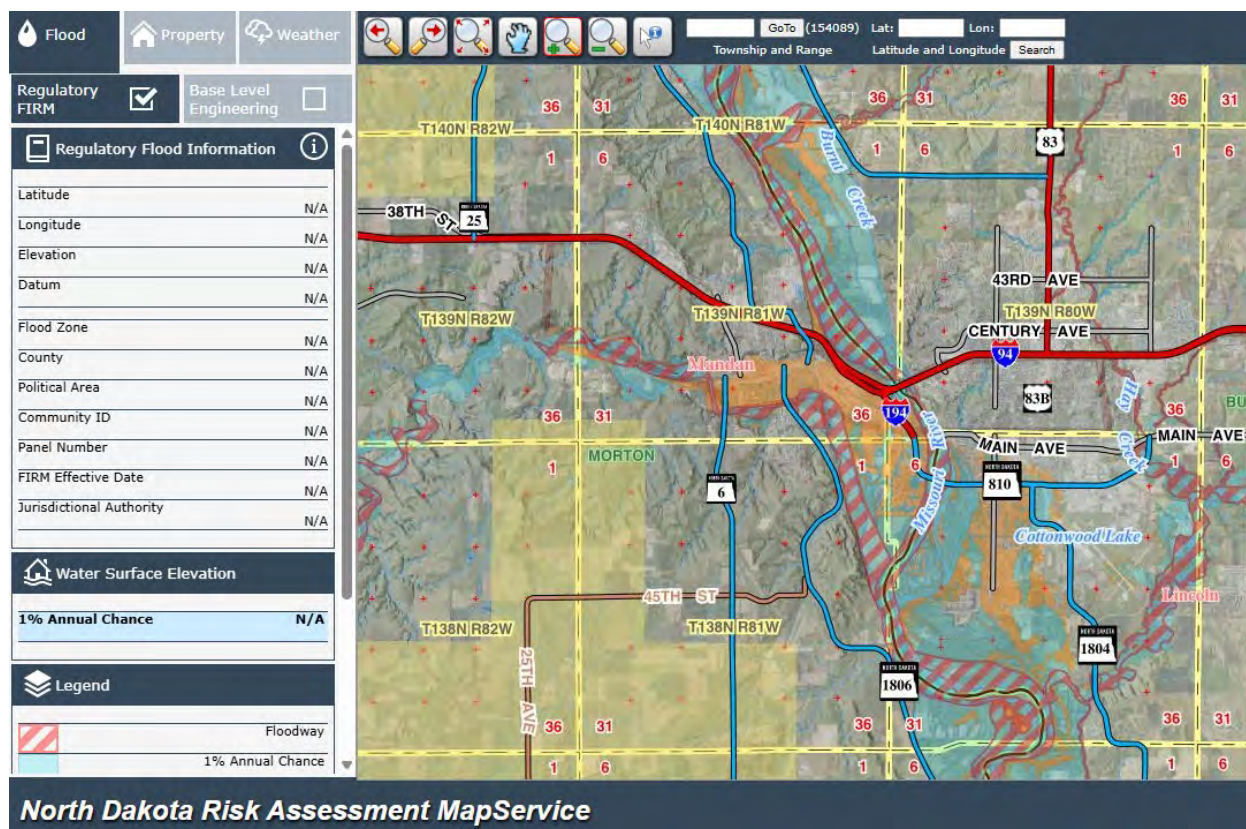
## City of Wing

Source: [FEMA Map Service Center](https://www.fema.gov/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**

| <u>Location</u>               | <u>Date</u> | <u>Time</u> | <u>Type</u> | <u>Dth</u> | <u>Ini</u> | <u>PrD</u> | <u>CrD</u> |
|-------------------------------|-------------|-------------|-------------|------------|------------|------------|------------|
| <a href="#">WILTON</a>        | 08/01/2011  | 00:00       | Flood       | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">WILTON</a>        | 07/01/2011  | 00:00       | Flood       | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">WILTON</a>        | 06/02/2011  | 00:00       | Flood       | 0          | 0          | 20.000M    | 0.00K      |
| <a href="#">WILTON</a>        | 04/01/2009  | 00:00       | Flood       | 0          | 0          | 558.00K    | 0.00K      |
| <a href="#">WILTON</a>        | 03/06/2009  | 00:00       | Flood       | 0          | 0          | 530.00K    | 0.00K      |
| <a href="#">MENOKEN</a>       | 06/07/2007  | 00:00       | Flood       | 0          | 0          | 50.00K     | 100.00K    |
| <a href="#">BISMARCK</a>      | 08/31/2002  | 19:05       | Flood       | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BISMARCK</a>      | 07/27/2001  | 02:00       | Flood       | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BISMARCK</a>      | 07/26/2001  | 22:00       | Flood       | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a>      | 02/26/2000  | 11:58       | Flood       | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BISMARCK ARPT</a> | 08/12/1999  | 00:00       | Flood       | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a>      | 03/20/1999  | 09:00       | Flood       | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a>      | 03/21/1997  | 08:00       | Flood       | 0          | 0          | 150.00K    | 0.00K      |
| <b>Totals:</b>                |             |             |             | 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 80<sup>th</sup> St SE and 93<sup>rd</sup> 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 25<sup>th</sup> through the 27<sup>th</sup> weekend, cresting 16.6 feet. The flood stage is 15 feet. The flood warning remained in effect until March 1<sup>st</sup>, 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 24<sup>th</sup>.

**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.

|  <b>Community Status Book Report</b>  <b>NORTH DAKOTA</b> |                                                                                                                                                   |                      |                      |                   |               |                |               |            |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|-------------------|---------------|----------------|---------------|------------|--------|
| Communities Participating in the National Flood Program                                                                                                                                                                       |                                                                                                                                                   |                      |                      |                   |               |                |               |            |        |
| Select here for not participating                                                                                                                                                                                             |                                                                                                                                                   |                      |                      |                   |               |                |               |            |        |
| 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](https://www.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](https://www.nd.gov)

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)

|                         |                                                     |
|-------------------------|-----------------------------------------------------|
| <b>Frequency</b>        | Nearly 100% probability in the next year            |
| <b>Severity</b>         | Negligible (Less than 10% of jurisdiction affected) |
| <b>Risk Class</b>       | C                                                   |
| <b>Seasonal Pattern</b> | Spring and Summer                                   |
| <b>Duration</b>         | 1 to 10 days                                        |
| <b>Speed of Onset</b>   | Hours to days                                       |
| <b>Location</b>         | 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<br>tons/acres/year | Acres     | % of County | Water Erosion Potential           | Acres     | Percent | Wind Erosion Potential    | Acres     | Percent |
|----------------------------------------|-----------|-------------|-----------------------------------|-----------|---------|---------------------------|-----------|---------|
| 2                                      | 160,682   | 15.05%      | Very low water erosion potential  | 437,448   | 40.97%  | Not limited               | 676,740   | 63.38%  |
| 3                                      | 106,395   | 9.96%       | Low water erosion potential       | 471,309   | 44.14%  | Somewhat limited          | 98,177    | 9.19%   |
| 4                                      | 1,317     | 0.12%       | Moderate water erosion potential  | 57,460    | 5.38%   | Very limited              | 292,841   | 27.43%  |
| 5                                      | 766,237   | 71.76%      | High water erosion potential      | 69,027    | 6.46%   | Total for Burleigh County | 1,067,758 | 100.00% |
| <Null>                                 | 33,127    | 3.10%       | Very high water erosion potential | 1,381     | 0.13%   |                           |           |         |
| Total for Burleigh County              | 1,067,758 | 100.00%     | Not rated                         | 31,133    | 2.92%   |                           |           |         |
|                                        |           |             | 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.

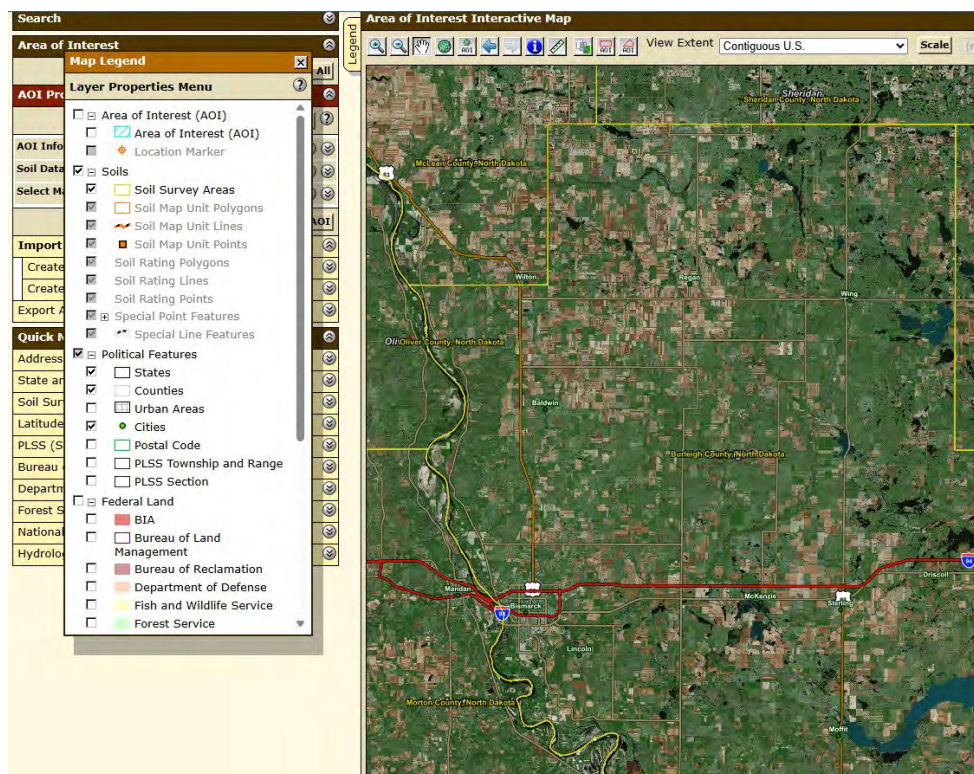
Burleigh County is in the glaciated Missouri Plateau Section, with the northeast corner of the state in the Missouri Coteau District and the remainder in the Coteau Slope District ([Kume and Hansen](#), 1965; [Stout](#), 1974). According to Kume (1965), “The soils of Burleigh County are classified in 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    |

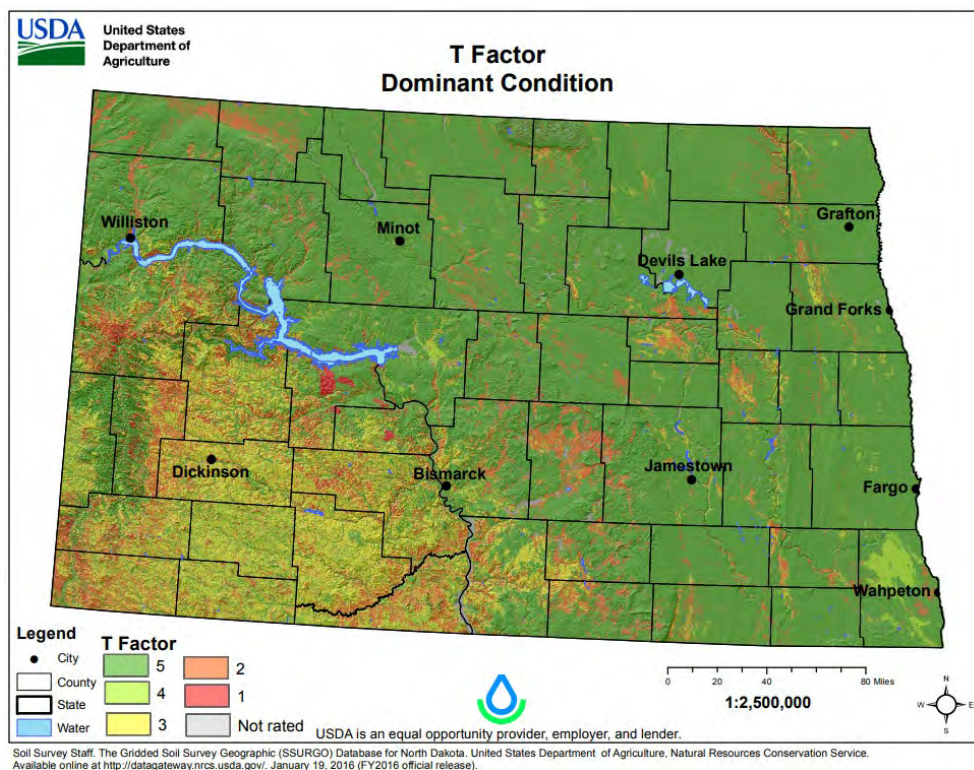
Source: [NRCS/USDA National Soil Survey Handbook](#), Page 57





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.

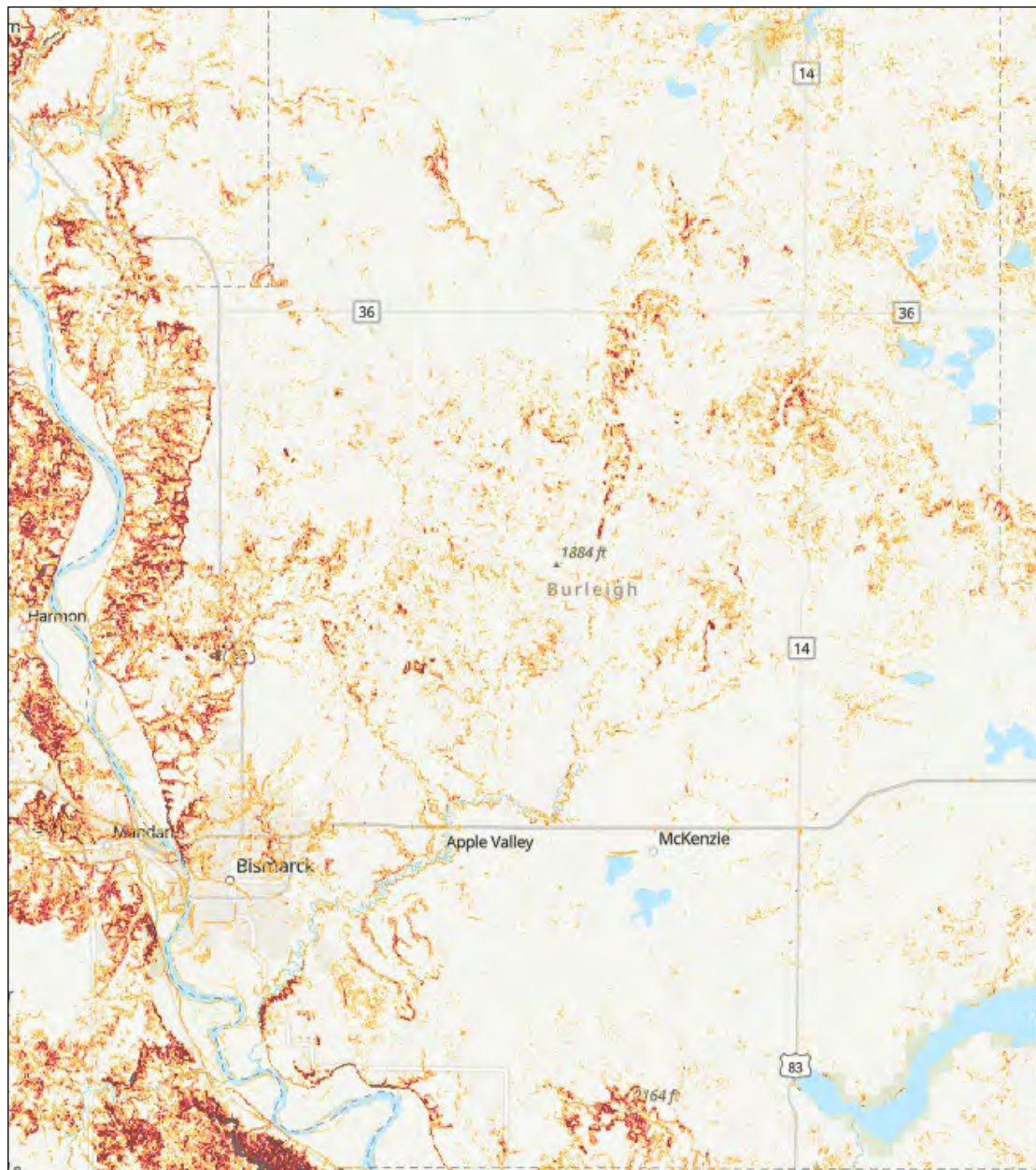


Source: [USDA](#)



## 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.”



**Increasing Susceptibility**



Areas without colored shading represent very low landslide potential

Source: [USGS ArcGIS](#)

## Radon

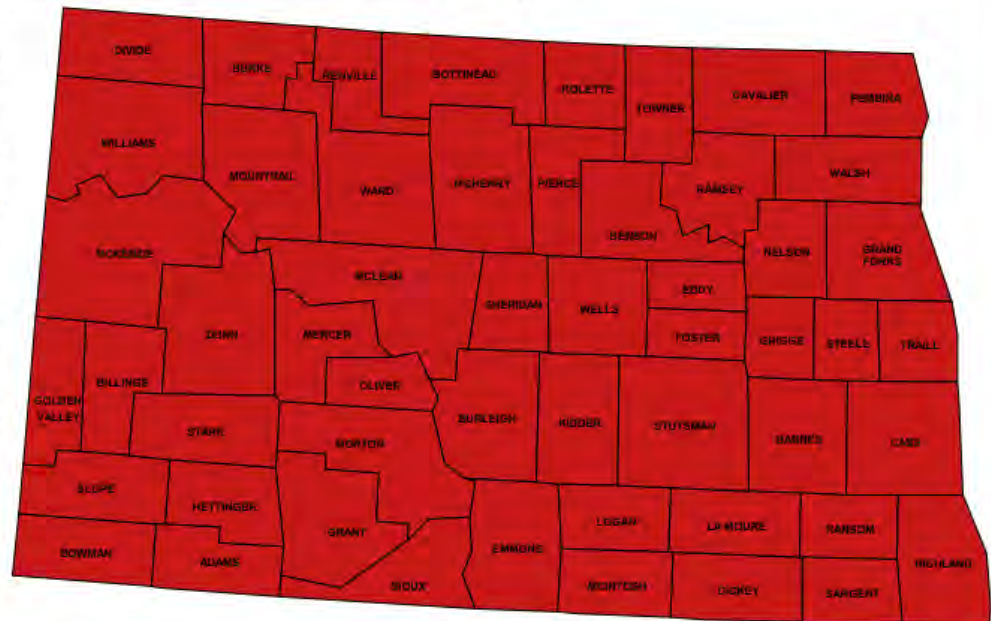
[United States Environmental Protection Agency](https://www.epa.gov/radon) defines radon: “Radon is a radioactive gas that forms naturally when uranium, thorium, or radium, which are radioactive metals break down in rocks, soil and groundwater. People can be exposed to radon primarily from breathing 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.”

### NORTH DAKOTA - EPA Map of Radon Zones

<https://www.epa.gov/radon/epa-map-radon-zones>

The Map of Radon Zones was developed in 1993 to identify areas of the U.S. with the potential for elevated indoor radon levels. The map is intended to help governments and other organizations target risk reduction activities and resources. The Map of Radon Zones should not be used to determine if individual homes need to be tested. No matter where you live, test your home for radon—it's easy and inexpensive. Fix your home if your radon level is 4 picocuries per liter (pCi/L) (150 becquerels per meter cubed (Bq/m<sup>3</sup>)) or higher. Consider fixing if your level is between 2 and 4 pCi/L (75 - 150 Bq/m<sup>3</sup>).

The Map of Radon Zones was developed using data on indoor radon measurements, geology, aerial radioactivity, soil parameters, and foundation types. The EPA recommends that this map be supplemented with any available local data to further understand and predict the radon potential for a specific area. **All homes should be tested, regardless of zone designation.**



What do the colors mean?

| Zone        | Zone 1 (red zones)                                                                                                                                                                 | Zone 2 (orange zones)                                                                                                                                                                                 | Zone 3 (yellow zones)                                                                                                   |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Color       |                                                                                                                                                                                    |                                                                                                                                                                                                       |                                                                                                                         |
| Description | Highest potential<br>Counties have a predicted average indoor screening level > (Greater than) 4 pCi/L (picocuries per liter) (150 Bq/m <sup>3</sup> (becquerels per meter cubed)) | Moderate potential<br>Counties have a predicted average screening level ≥ (Greater than and equal to) 2 pCi/L (75 Bq/m <sup>3</sup> ) and ≤ (less than and equal to) 4 pCi/L (150 Bq/m <sup>3</sup> ) | Low potential<br>Counties have a predicted average indoor screening level < (Less than) 2 pCi/L (75 Bq/m <sup>3</sup> ) |

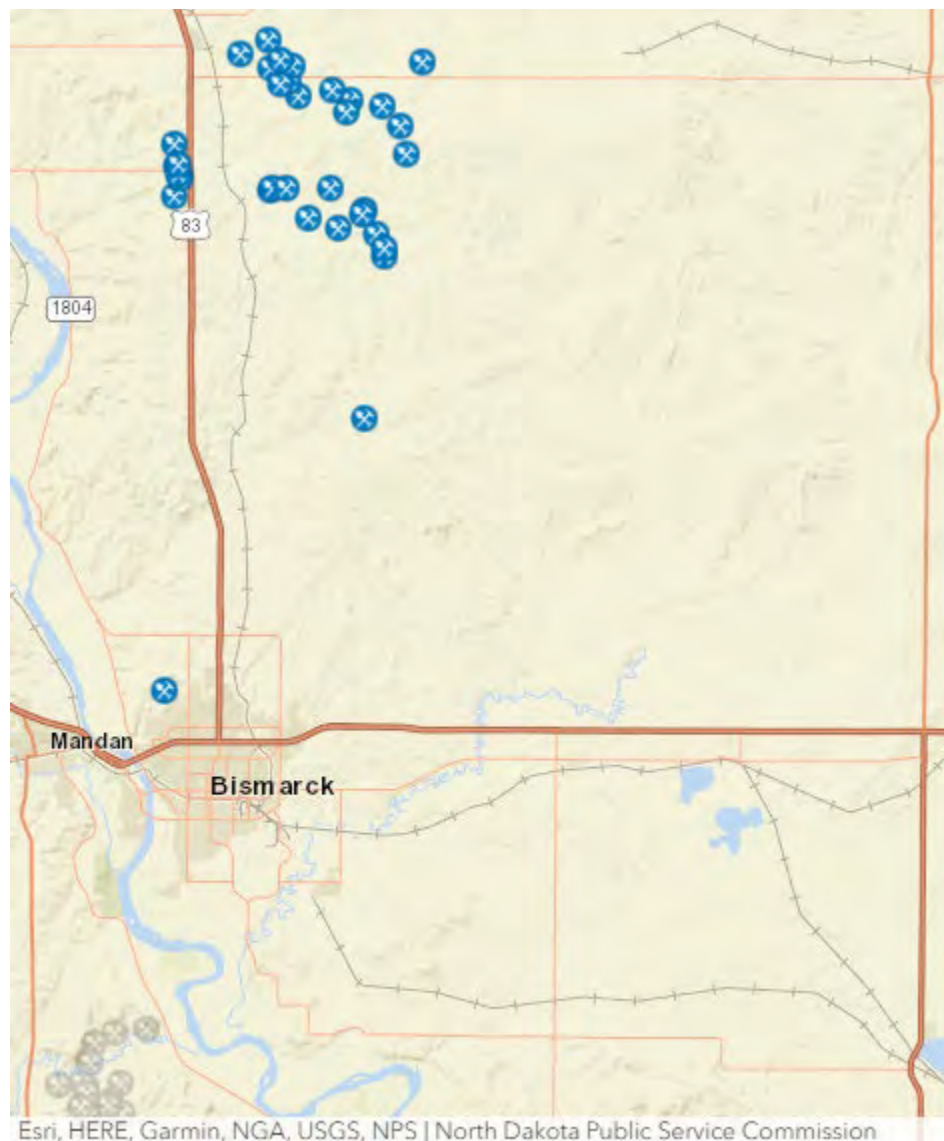
**IMPORTANT:** Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of North Dakota" (USGS Open-file Report 93-292-H) before using this map. See <https://doi.org/10.3133/ofr93292H>. This document contains information on radon potential variations within counties. The EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.



## **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.

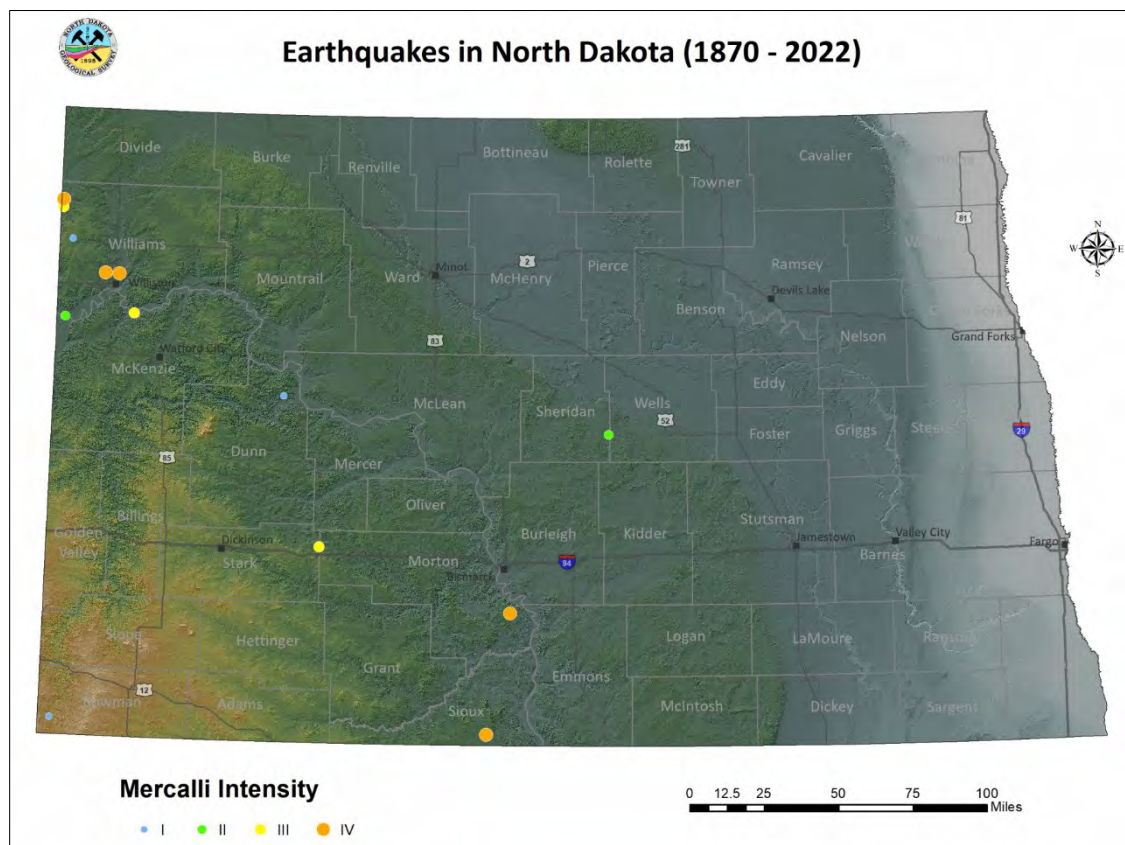
There are 34 abandoned coal mines in Burleigh County which are managed by the North Dakota Public Service Commission's Abandoned Mine Lands Division to eliminate dangers such as subsidence. Abandoned underground lignite mines can cause sinkholes and subsidence, rendering land unusable.



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.

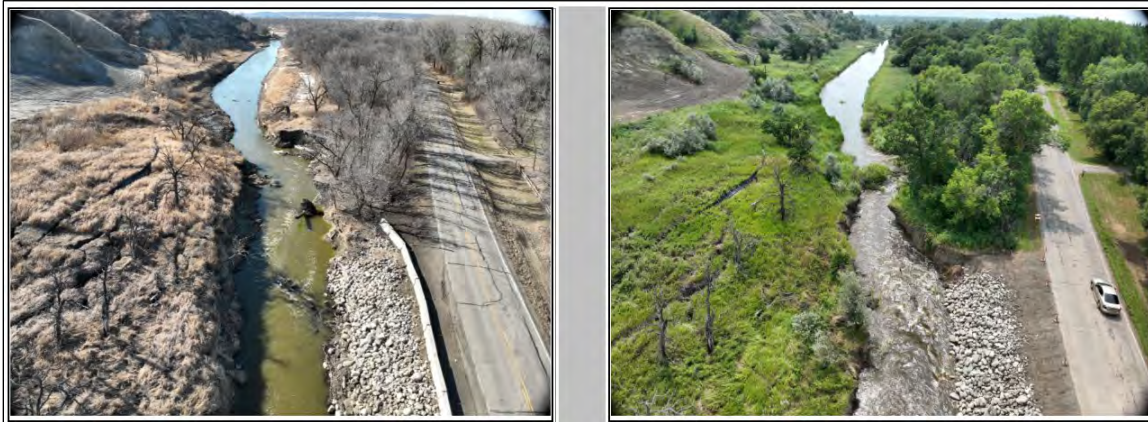
**December 22, 2019, to present:** River Road closed between Burnt Boat Road and Sandy River Drive due to a landslide. Debris removed and road re-opened on December 30, 2019. The area continues to be monitored for movement.



**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

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

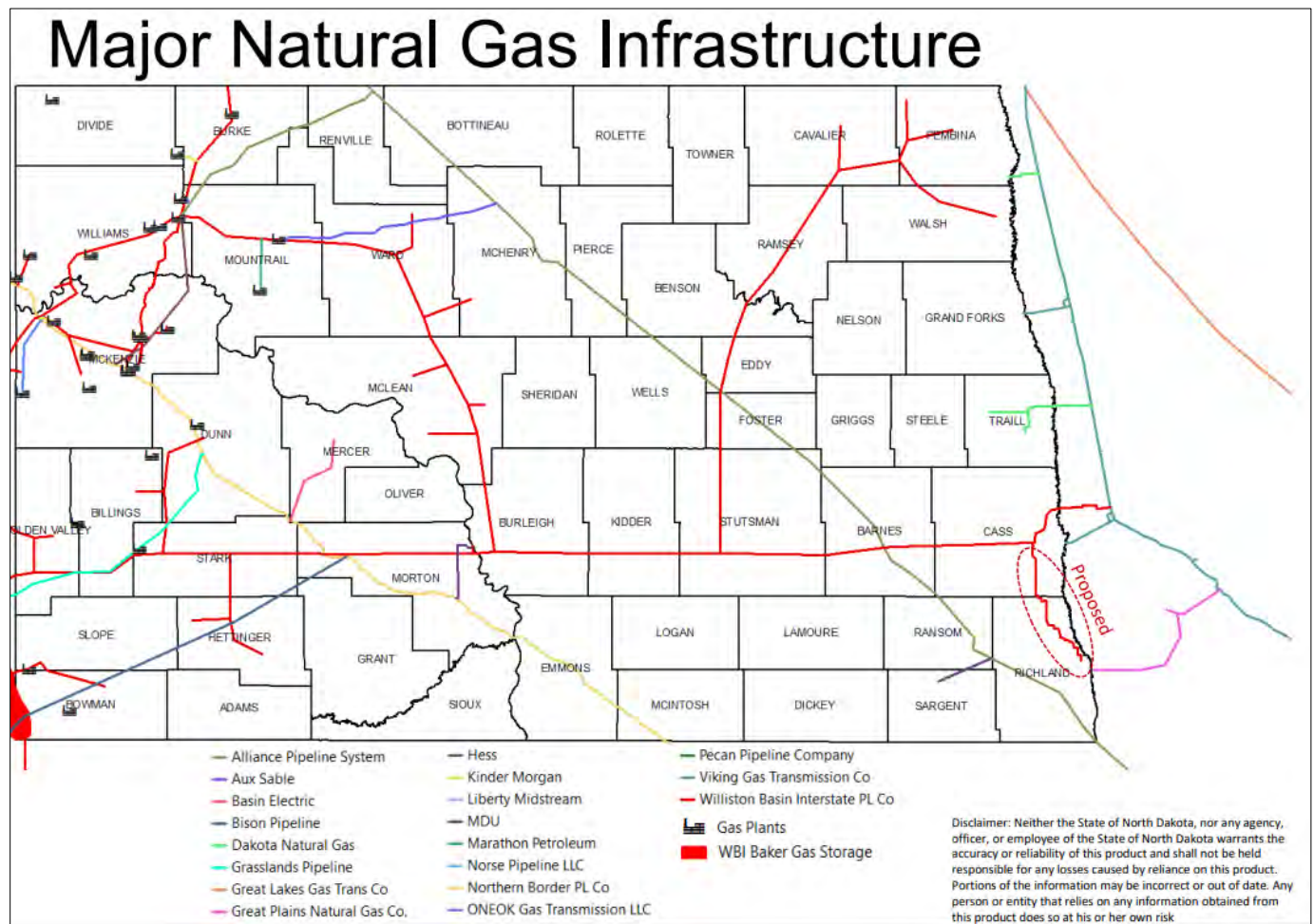
Hazardous materials are transported via three modes into and within Burleigh County:

- 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.

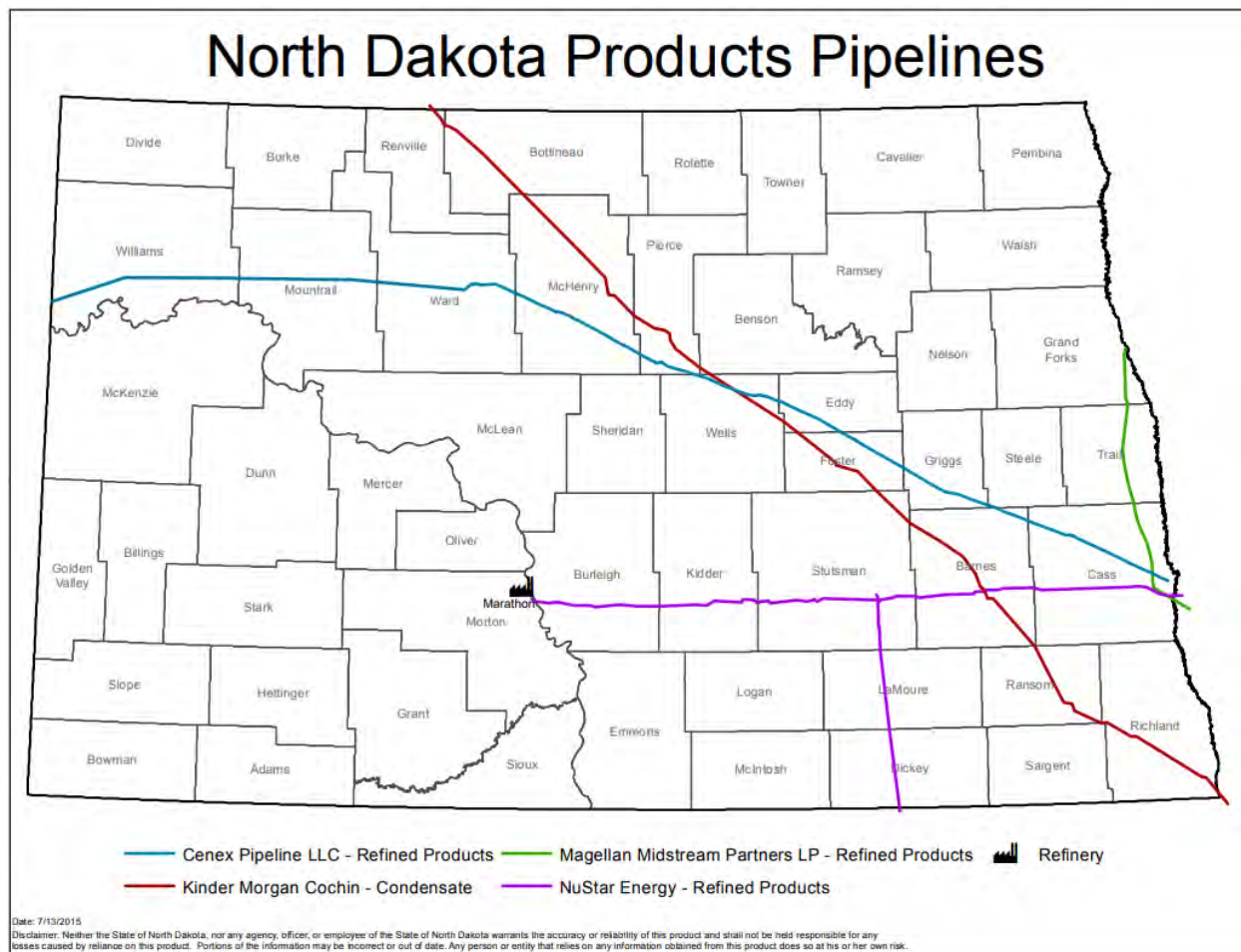
**Identified Impacts**

- 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](https://www.nd.gov/pipeline/)



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

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|                     |                        |           |     |           |                 |    |       |      |
|---------------------|------------------------|-----------|-----|-----------|-----------------|----|-------|------|
| <a href="#">321</a> | Oil/Gas Spill          | 4/17/2021 | Yes | 4/19/2021 | Benzene - 1 gal | 25 | 139 N | 80 W |
| <a href="#">320</a> | Oil/Gas Spill          | 4/16/2021 | Yes | 4/19/2021 | Benzene - 1 gal | 24 | 139 N | 80 W |
| <a href="#">227</a> | Environmental Incident | 3/14/2021 | Yes | 3/16/2021 | Milk - 7900 gal | 3  | 141 N | 76 W |
| <a href="#">77</a>  | 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)

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

**Description**

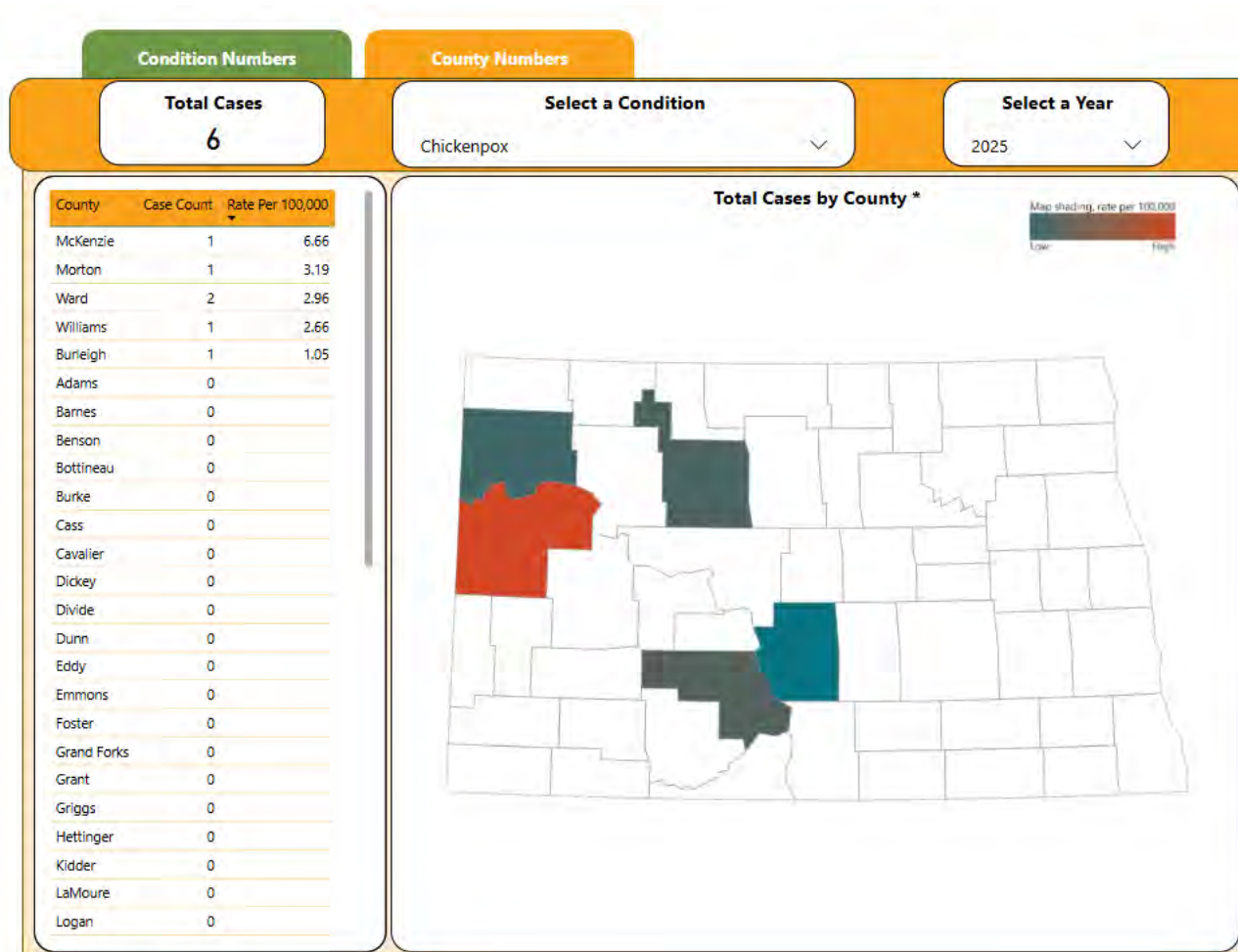
Naturally occurring biological diseases in humans as well as those biological agents found in the environment, or diagnosed in animals, that have the potential for transmission to humans.

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**

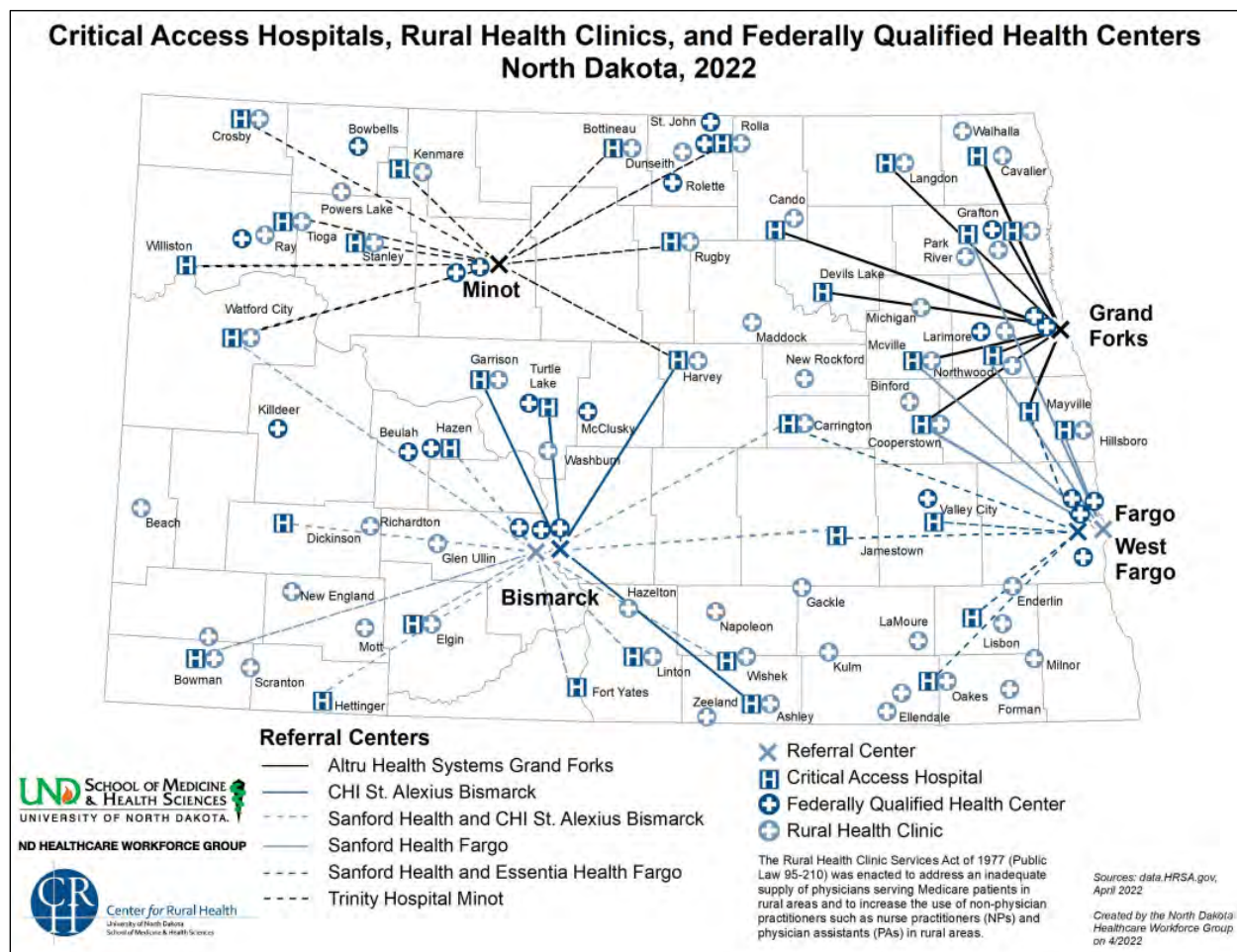
- Business Interruptions
- Delayed Emergency Response
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- Loss of Potable Water
- Mass Casualties
- School Closure

The ND Department of Health and Human Services maintains a listing of “[Diseases, Conditions and Immunization](#)” as well as “[Disease Report Dashboard](#)”.



ND is primarily rural with access to networked medical care:





Source: [Center for Rural Health](https://www.centerforruralhealth.org/), 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

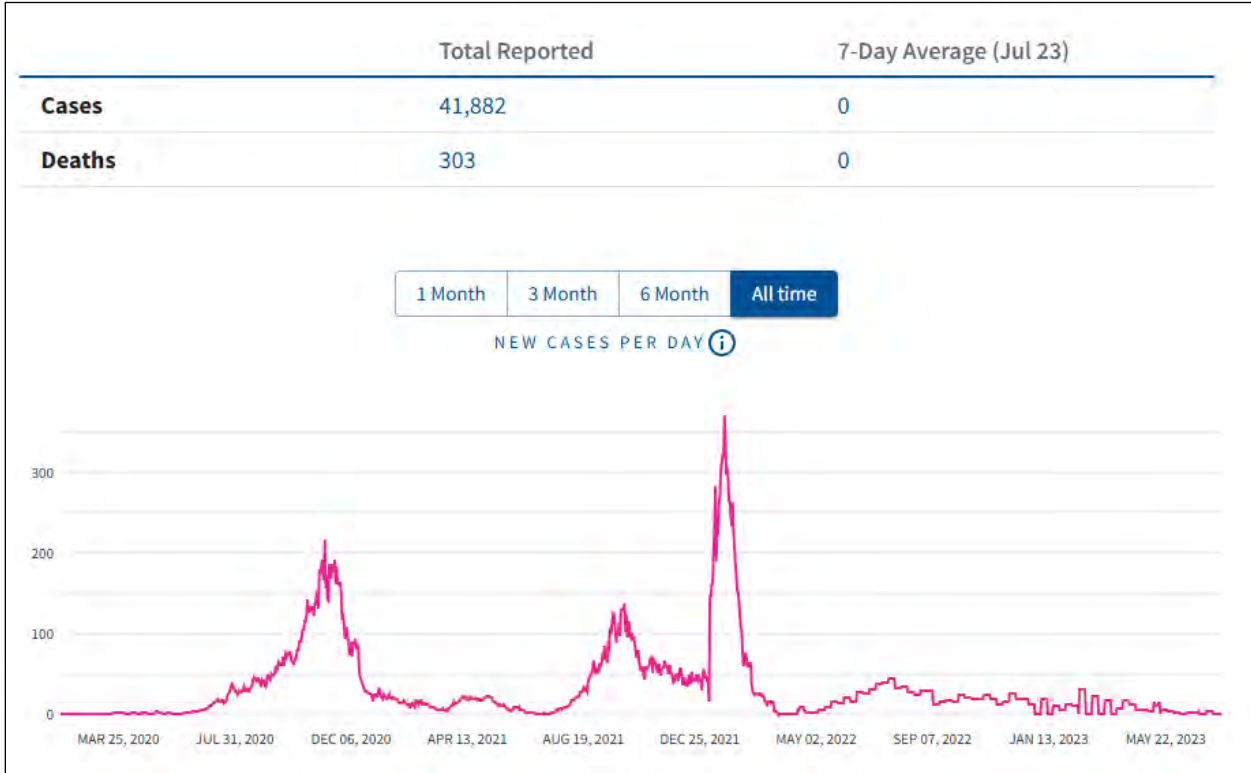
Availability of resources to help elderly stay in their homes

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



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.



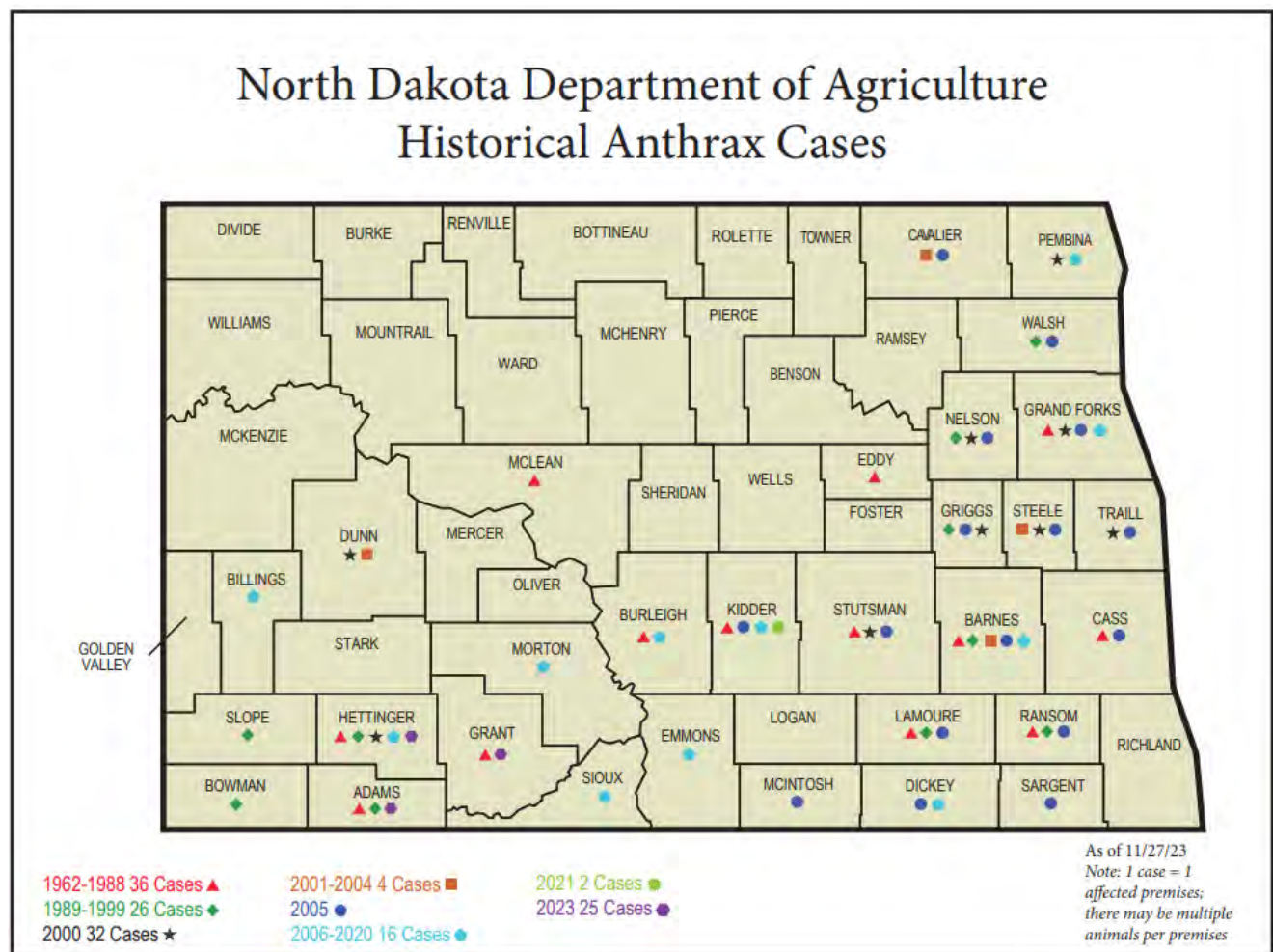
### Agricultural Diseases, Noxious Weeds, and Pests

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

#### Anthrax

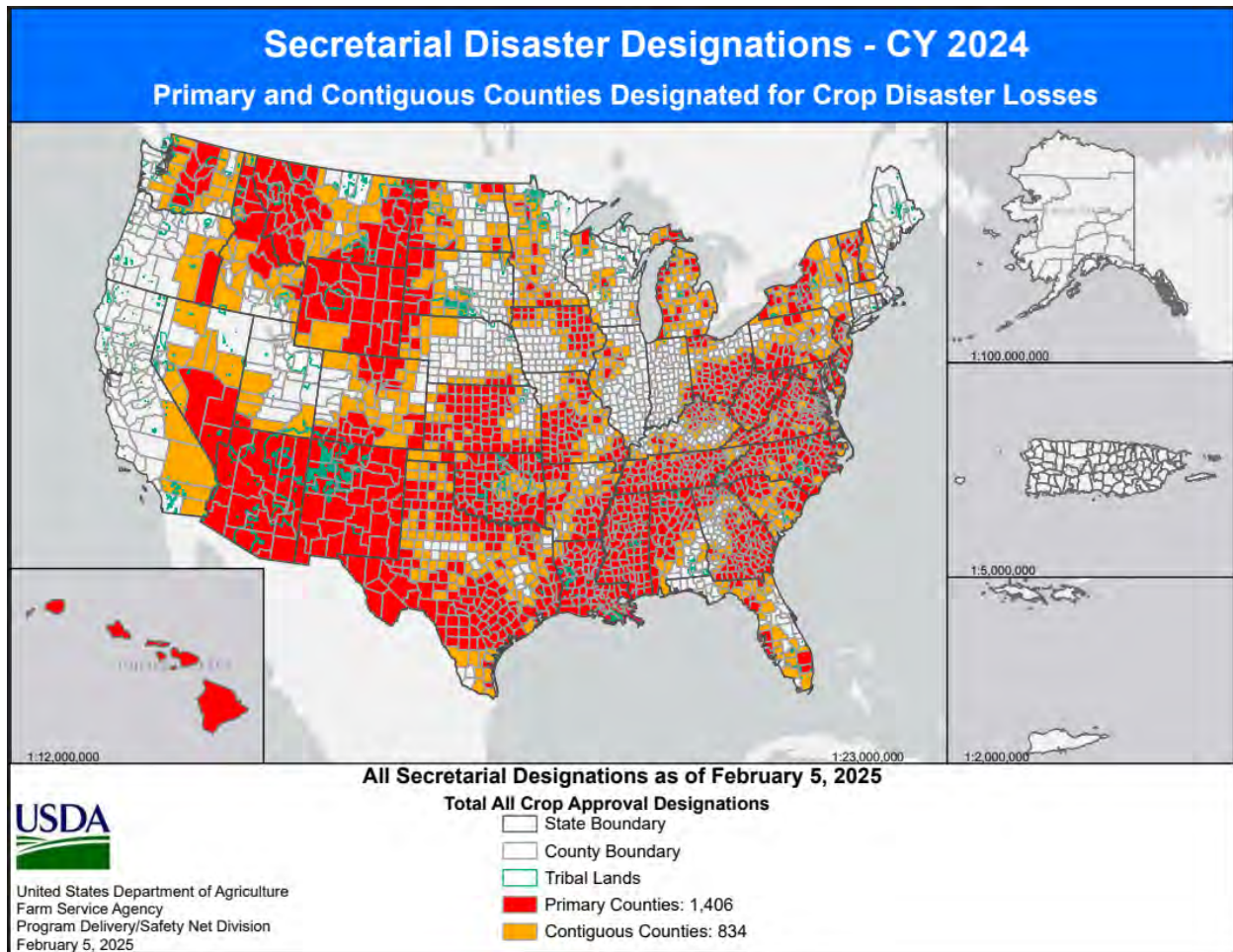
“Anthrax occurs worldwide and is associated with sudden death of cattle and sheep. Anthrax can infect all warm-blooded animals, including humans. The bacteria that causes anthrax (*Bacillus anthracis*) can form spores which are resistant to heat, cold, chemical disinfectants and drying. The anthrax spore 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 States Department of Agriculture.



Source: [United States Department of Agriculture Farm Service Agency](https://www.fsa.usda.gov/programs-and-services/disaster-assistance/secretarial-disaster-designations)



### Severe Summer Weather

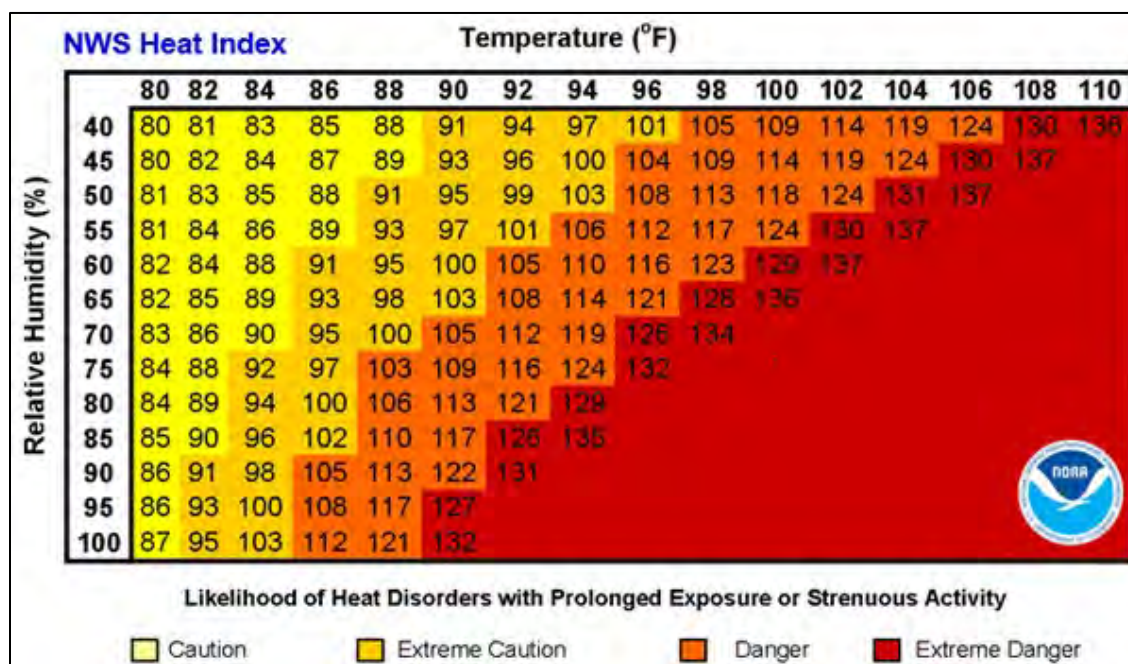
(Including downbursts, extreme heat, hail, lightning, high wind, and tornado)

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

#### Description

Severe summer storms are generated by temperature imbalances in the atmosphere, and as warm, moist air 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.



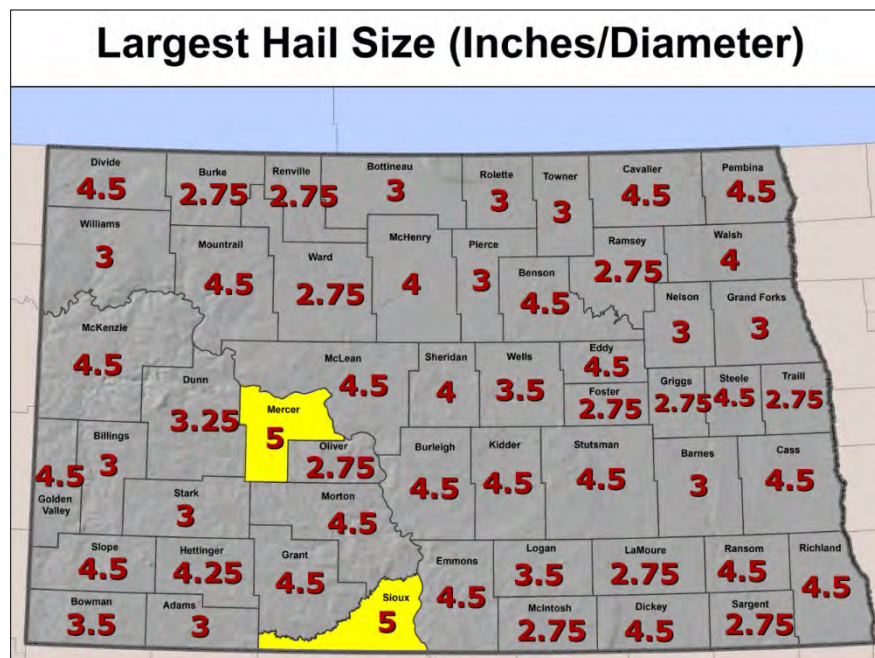
**Lightning:**

- 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](https://www.weather.gov/bismarck/), 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   |         | Terminology     | Description                                                                                  |
|                                               | Range | Average |                 |                                                                                              |
| 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](#)

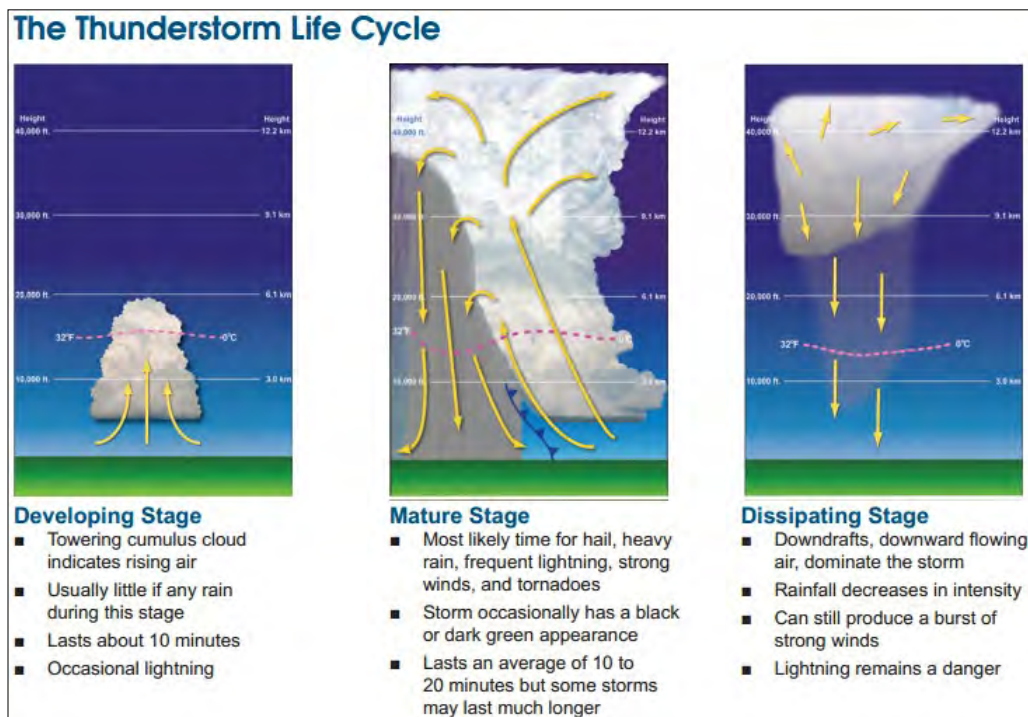


## Thunderstorm Probability and Related Lightning Activity Level (LAL)

| 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)**

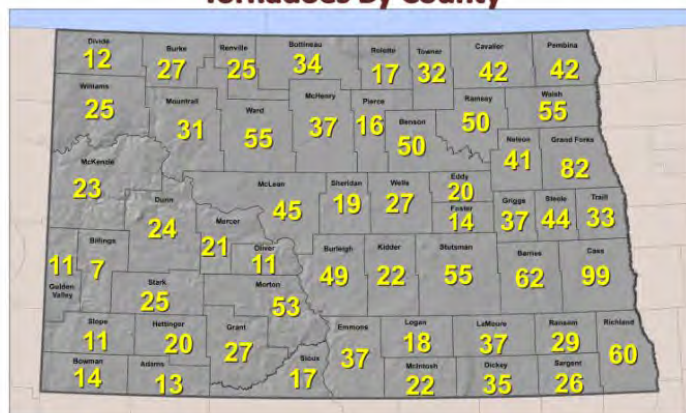
| EF SCALE  |                     |
|-----------|---------------------|
| EF Rating | 3 Second Gust (mph) |
| 0         | 65-85               |
| 1         | 86-110              |
| 2         | 111-135             |
| 3         | 136-165             |
| 4         | 166-200             |
| 5         |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

Source: [National Weather Service](#)

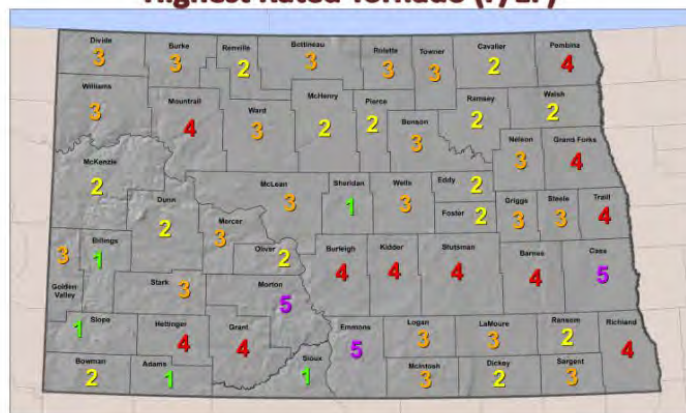


# North Dakota Severe Weather Statistics (1950 – 2024)

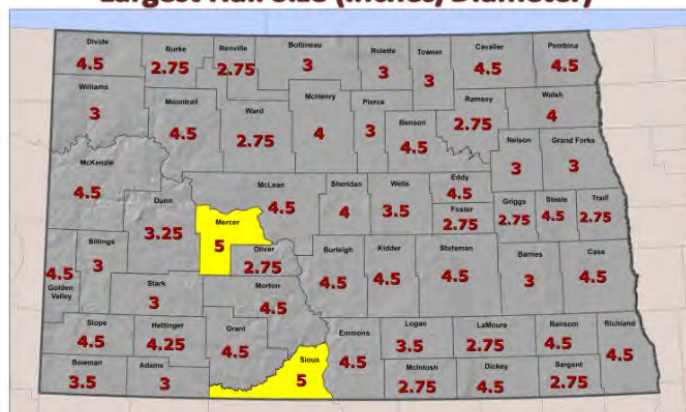
## Tornadoes By County



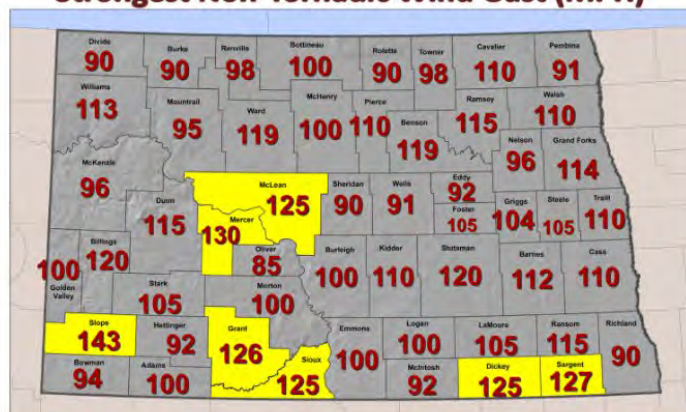
## Highest Rated Tornado (F/EF)



## Largest Hail Size (Inches/Diameter)



## Strongest Non-Tornadic Wind Gust (MPH)



Source: [National Weather Service Weather Forecast Office, Bismarck, ND](https://www.weather.gov/bism)

**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

| <u>Location</u>          | <u>Date</u> | <u>Time</u> | <u>T.Z.</u> | <u>Type</u>    | <u>Dth</u> | <u>Inj</u> | <u>PrD</u> | <u>CrD</u> |
|--------------------------|-------------|-------------|-------------|----------------|------------|------------|------------|------------|
| <a href="#">BURLEIGH</a> | 08/03/2001  | 11:00       | CST         | Heat           | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a> | 08/04/2001  | 11:00       | CST         | Heat           | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a> | 08/07/2001  | 11:00       | CST         | Heat           | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a> | 07/16/2011  | 11:00       | CST-6       | Excessive Heat | 0          | 0          | 0.00K      | 0.00K      |
| <b>Totals:</b>           |             |             |             |                | 0          | 0          | 0.00K      | 0.00K      |

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

### Lightning

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

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

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

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



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

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

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

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

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

|                         |                                                          |
|-------------------------|----------------------------------------------------------|
| <b>Frequency</b>        | Highly Likely (Nearly 100% probability in the next year) |
| <b>Severity</b>         | Critical (25-50% of jurisdiction affected)               |
| <b>Risk Class</b>       | A                                                        |
| <b>Seasonal Pattern</b> | November to April                                        |
| <b>Duration</b>         | 2 to 5 days                                              |
| <b>Speed of Onset</b>   | 12 to 24 hours warning                                   |
| <b>Location</b>         | 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   |         | Terminology     | Description                                                                                  |
|                                               | Range | Average |                 |                                                                                              |
| 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.                                            |

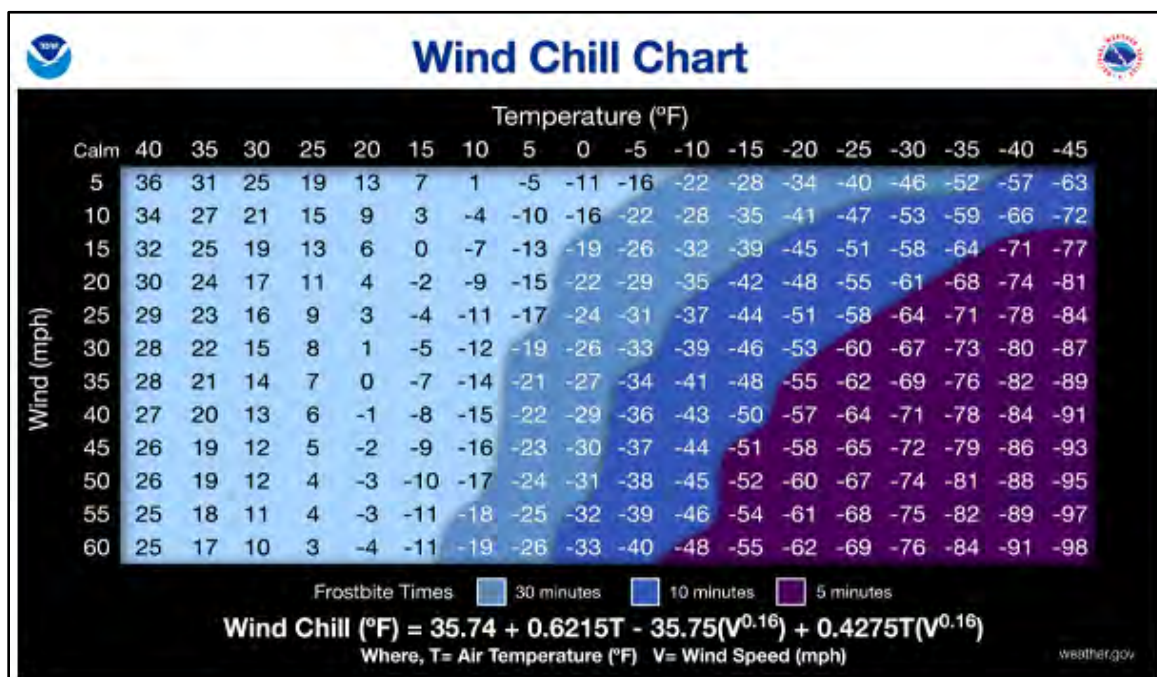
Source: [National Weather Service](#)

### Identified Impacts

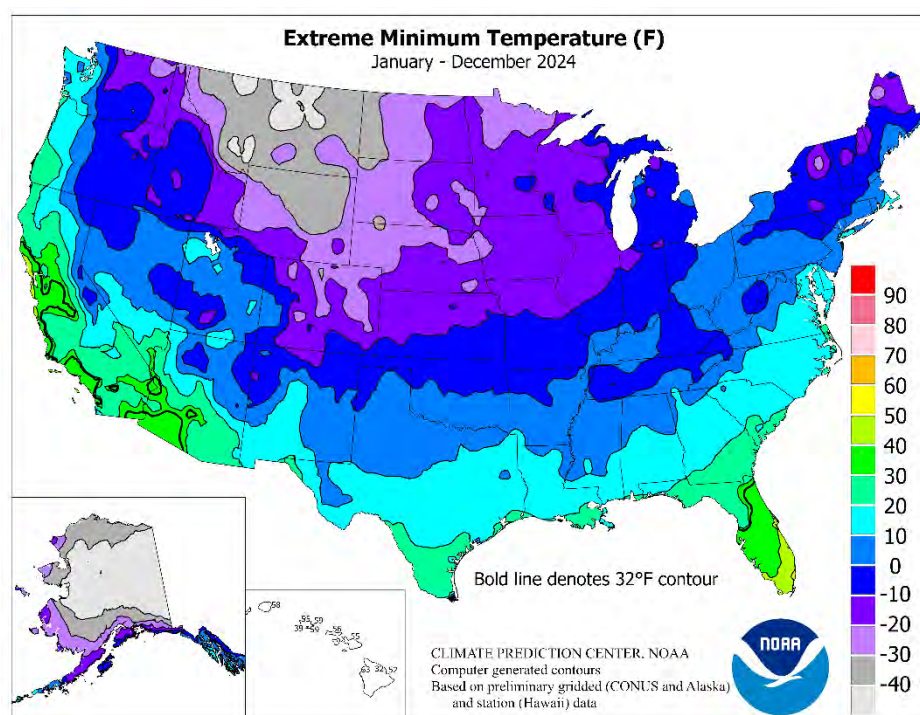
- Blocked Roads
- Building Collapse
- Business Interruptions
- Delayed Emergency Response
- Downed Power Lines
- Downed Trees
- Evacuation (Localized)
- HAZMAT Release
- Increased Fire Potential
- Increased Public Safety Runs
- Livestock Injury/Death
- Loss of Economy
- Loss/Overcrowded Medical Facilities
- 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](https://www.weather.gov), National Oceanic and Atmospheric Administration



Source: [Climate Prediction Center](https://climatepredictioncenter.noaa.gov)

**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)

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

| <u>Location</u>          | <u>Date</u> | <u>Time</u> | <u>T.Z.</u> | <u>Type</u>             | <u>Dth</u> | <u>Inj</u> | <u>PrD</u> | <u>CrD</u> |
|--------------------------|-------------|-------------|-------------|-------------------------|------------|------------|------------|------------|
| <a href="#">BURLEIGH</a> | 02/16/2025  | 18:00       | CST-6       | Extreme Cold/wind Chill | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a> | 01/18/2025  | 20:00       | CST-6       | Cold/wind Chill         | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a> | 01/12/2024  | 19:00       | CST-6       | Cold/wind Chill         | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a> | 02/10/2021  | 20:00       | CST-6       | Extreme Cold/wind Chill | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a> | 01/29/2019  | 00:00       | CST-6       | Extreme Cold/wind Chill | 0          | 0          | 0.00K      | 0.00K      |
| <a href="#">BURLEIGH</a> | 01/29/1996  | 12:00       | CST         | Cold/wind Chill         | 1          | 0          | 0.00K      | 0.00K      |
| <b>Totals:</b>           |             |             |             |                         | 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)

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

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

### Space Weather

|                         |                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------|
| <b>Frequency</b>        | Likely (10–100% probability in the next year, or at least 1 chance in next 10 years) |
| <b>Severity</b>         | Critical (25-50% of jurisdiction affected)                                           |
| <b>Risk Class</b>       | B                                                                                    |
| <b>Seasonal Pattern</b> | None                                                                                 |
| <b>Duration</b>         | Days/Weeks                                                                           |
| <b>Speed of Onset</b>   | Little to no warning                                                                 |
| <b>Location</b>         | 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<br>(1 cycle = 11 years) |
|-------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|
| G 5   | Extreme     | <b>Power systems:</b> Widespread voltage control problems and protective system problems can occur, some grid systems may experience complete collapse or blackouts. Transformers may experience damage.<br><b>Spacecraft operations:</b> May experience extensive surface charging, problems with orientation, uplink/downlink and tracking satellites.<br><b>Other systems:</b> 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<br>(4 days per cycle)         |
| G 4   | Severe      | <b>Power systems:</b> Possible widespread voltage control problems and some protective systems will mistakenly trip out key assets from the grid.<br><b>Spacecraft operations:</b> May experience surface charging and tracking problems, corrections may be needed for orientation problems.<br><b>Other systems:</b> 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<br>(60 days per cycle)      |
| G 3   | Strong      | <b>Power systems:</b> Voltage corrections may be required, false alarms triggered on some protection devices.<br><b>Spacecraft operations:</b> Surface charging may occur on satellite components, drag may increase on low-Earth-orbit satellites, and corrections may be needed for orientation problems.<br><b>Other systems:</b> 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<br>(130 days per cycle)     |
| G 2   | Moderate    | <b>Power systems:</b> High-latitude power systems may experience voltage alarms, long-duration storms may cause transformer damage.<br><b>Spacecraft operations:</b> Corrective actions to orientation may be required by ground control; possible changes in drag affect orbit predictions.<br><b>Other systems:</b> 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<br>(360 days per cycle)     |
| G 1   | Minor       | <b>Power systems:</b> Weak power grid fluctuations can occur.<br><b>Spacecraft operations:</b> Minor impact on satellite operations possible.<br><b>Other systems:</b> 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<br>(900 days per cycle)    |



## Solar Radiation Storms

| Scale | Description | Effect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Physical measure<br>(Flux level of<br>$\geq 10$ MeV<br>particles) | Average Frequency<br>(1 cycle = 11 years) |
|-------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------|
| S 5   | Extreme     | <b>Biological:</b> 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.<br><b>Satellite operations:</b> 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.<br><b>Other systems:</b> 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      | <b>Biological:</b> Unavoidable radiation hazard to astronauts on EVA; passengers and crew in high-flying aircraft at high latitudes may be exposed to radiation risk.<br><b>Satellite operations:</b> May experience memory device problems and noise on imaging systems; star-tracker problems may cause orientation problems, and solar panel efficiency can be degraded.<br><b>Other systems:</b> 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      | <b>Biological:</b> Radiation hazard avoidance recommended for astronauts on EVA; passengers and crew in high-flying aircraft at high latitudes may be exposed to radiation risk.<br><b>Satellite operations:</b> Single-event upsets, noise in imaging systems, and slight reduction of efficiency in solar panel are likely.<br><b>Other systems:</b> Degraded HF radio propagation through the polar regions and navigation position errors likely.                                                                                                                                                                                         | $10^3$                                                            | 10 per cycle                              |
| S 2   | Moderate    | <b>Biological:</b> Passengers and crew in high-flying aircraft at high latitudes may be exposed to elevated radiation risk.<br><b>Satellite operations:</b> Infrequent single-event upsets possible.<br><b>Other systems:</b> 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       | <b>Biological:</b> None.<br><b>Satellite operations:</b> None.<br><b>Other systems:</b> Minor impacts on HF radio in the polar regions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10                                                                | 50 per cycle                              |

## Radio Blackouts Scale

| Scale | Description | Effect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Physical measure              | Average Frequency<br>(1 cycle = 11 years) |
|-------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------|
| R 5   | Extreme     | <b>HF Radio:</b> 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.<br><b>Navigation:</b> 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<br>( $2 \times 10^{-3}$ ) | Less than 1 per cycle                     |
| R 4   | Severe      | <b>HF Radio:</b> HF radio communication blackout on most of the sunlit side of Earth for one to two hours. HF radio contact lost during this time.<br><b>Navigation:</b> 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<br>( $10^{-3}$ )          | 8 per cycle<br>(8 days per cycle)         |
| R 3   | Strong      | <b>HF Radio:</b> Wide area blackout of HF radio communication, loss of radio contact for about an hour on sunlit side of Earth.<br><b>Navigation:</b> Low-frequency navigation signals degraded for about an hour.                                                                                                                                                                                                                                                                                                                                                        | X1<br>( $10^{-4}$ )           | 175 per cycle<br>(140 days per cycle)     |
| R 2   | Moderate    | <b>HF Radio:</b> Limited blackout of HF radio communication on sunlit side, loss of radio contact for tens of minutes.<br><b>Navigation:</b> Degradation of low-frequency navigation signals for tens of minutes.                                                                                                                                                                                                                                                                                                                                                         | M5<br>( $5 \times 10^{-5}$ )  | 350 per cycle<br>(300 days per cycle)     |
| R 1   | Minor       | <b>HF Radio:</b> Weak or minor degradation of HF radio communication on sunlit side, occasional loss of radio contact.<br><b>Navigation:</b> Low-frequency navigation signals degraded for brief intervals.                                                                                                                                                                                                                                                                                                                                                               | M1<br>( $10^{-6}$ )           | 2000 per cycle<br>(950 days per cycle)    |

## Impacts

Source: [NOAA National Weather Service Space Weather Prediction Center](https://www.noaa.gov/education/outreach-and-engagement/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

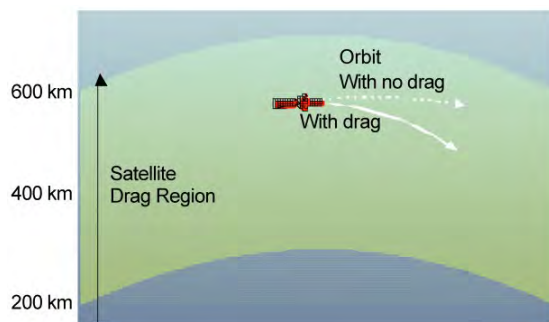
Space weather impacts radio communication in a number of ways. At frequencies in the 1 to 30 mega Hertz range (known as “High Frequency” or HF radio), the changes in ionospheric density and structure modify the transmission path and even block transmission of HF radio signals completely. These frequencies 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)

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

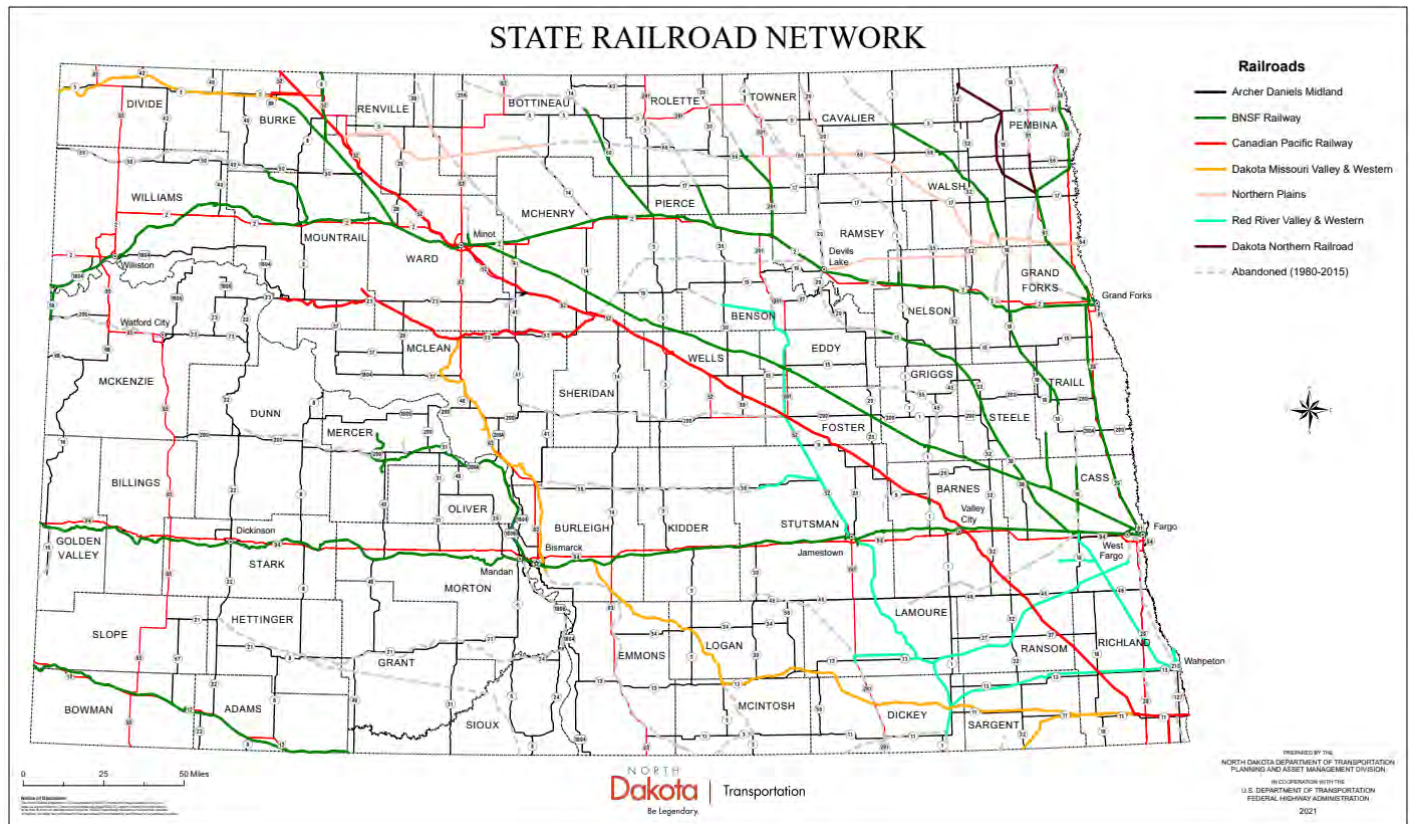
**Vehicle**

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).

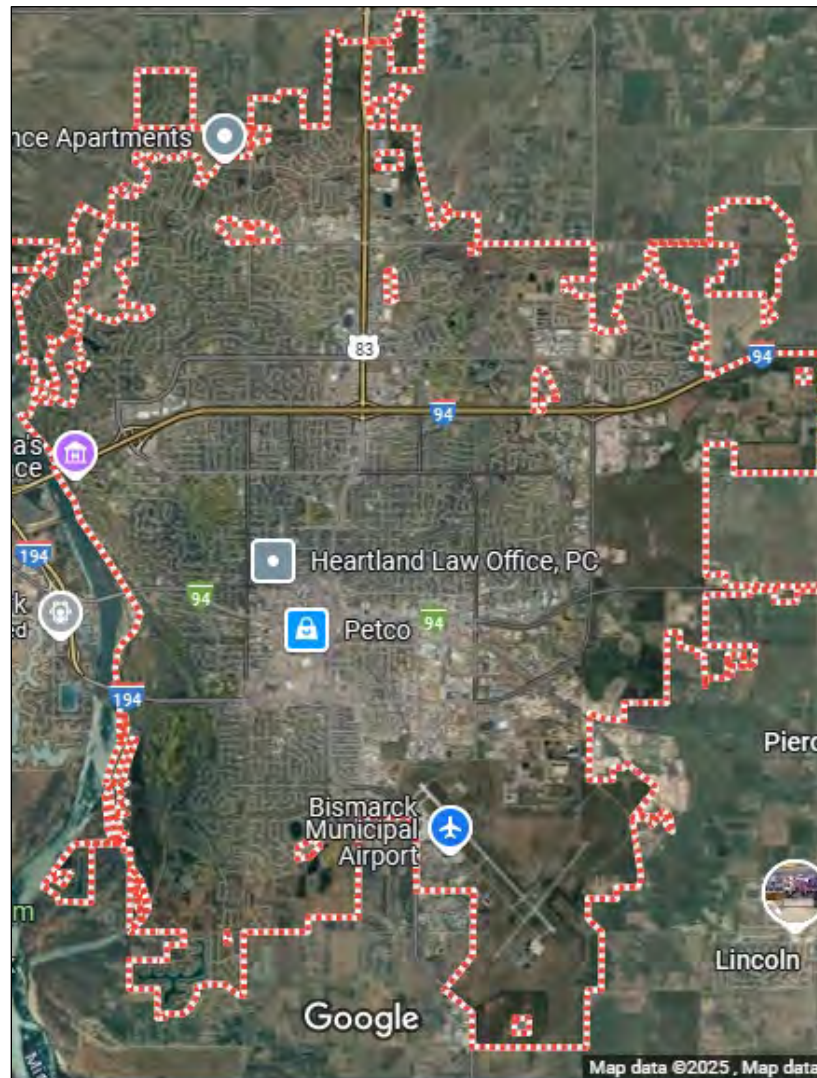


Source: [ND Department of Transportation](#)



### Airport

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



Source: [Google Map](#)

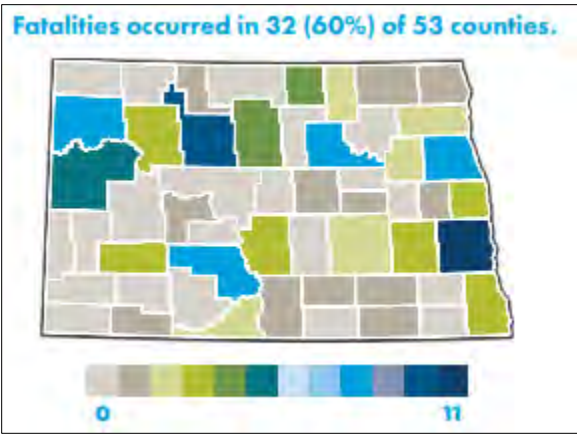
### Identified Impacts

- 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.

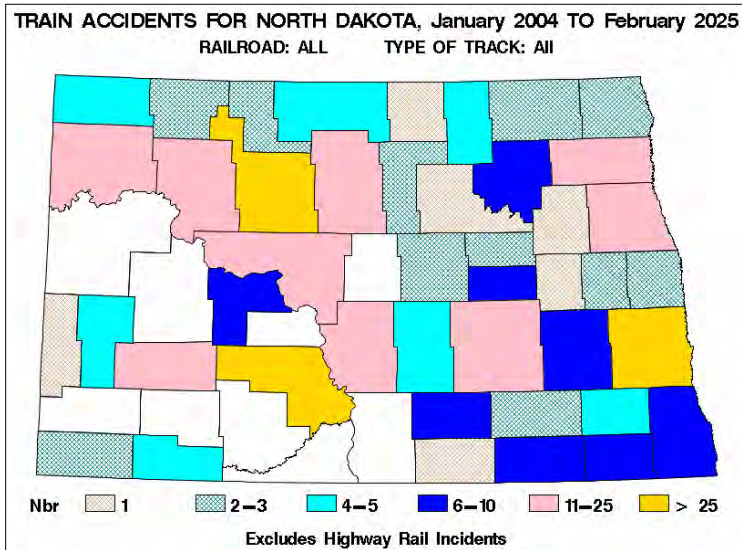


| North Dakota Motor Vehicle Crashes, Fatalities and Injuries 2014-2023 |         |            |          |
|-----------------------------------------------------------------------|---------|------------|----------|
| Year                                                                  | Crashes | Fatalities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

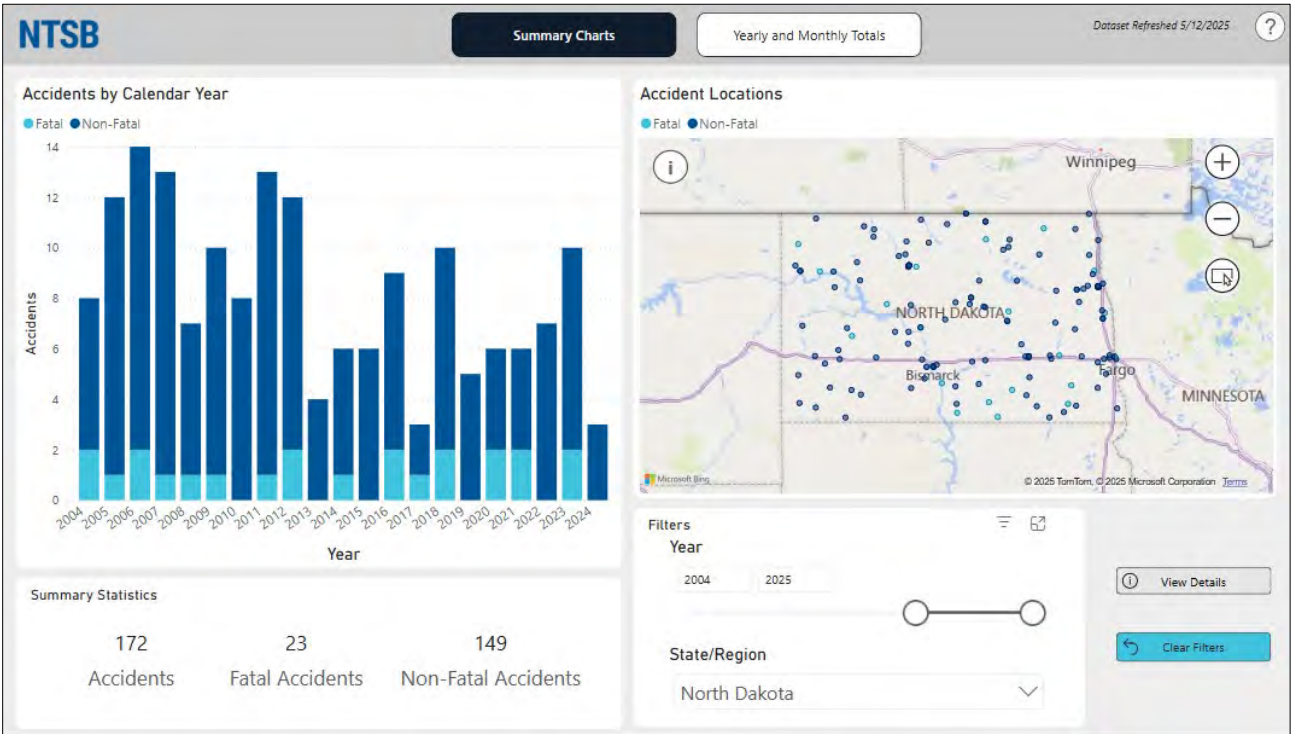


| County        | Totals |     |     |                   | Type of Accident |     |      | Causes |     |      |     |
|---------------|--------|-----|-----|-------------------|------------------|-----|------|--------|-----|------|-----|
|               | Accs   | Kld | Inj | Reportable Damage | Coll             | 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   |
| TRAIL         | 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<br>Planning Department |
| Updating                  | Every 5 years                    | Review and update plan as necessary                                                       | Emergency Manager<br>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.”

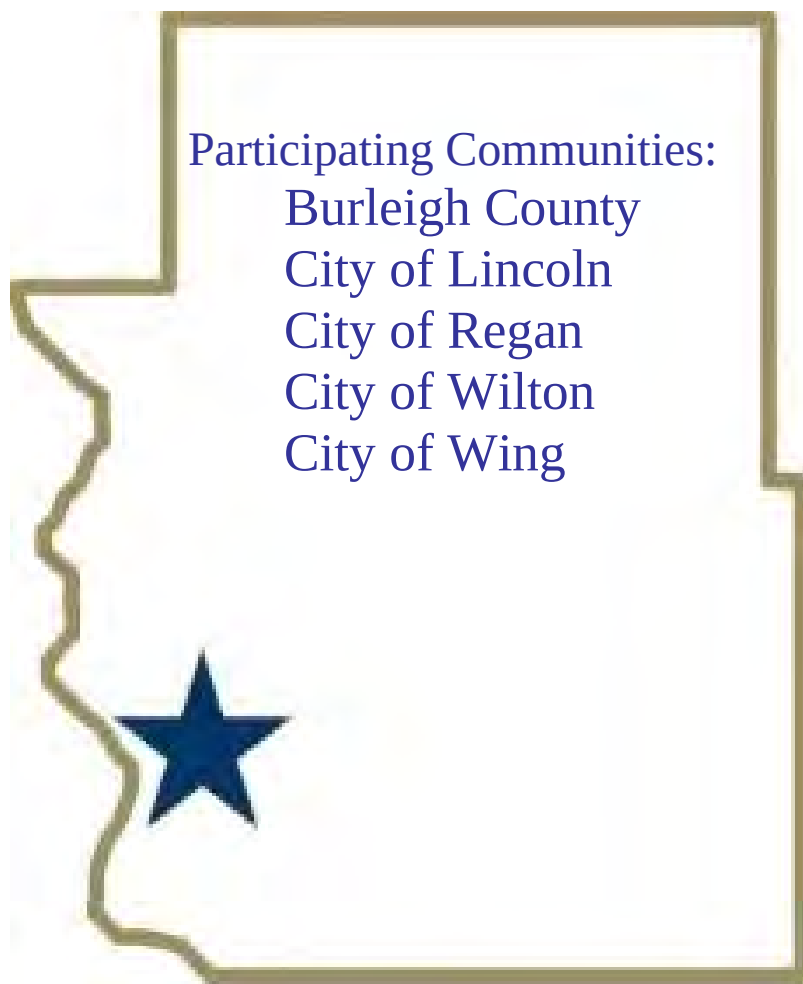
The Cities of Lincoln, Regan, Wilton, and Wing will incorporate data from this plan when reviewing their planning and regulatory capabilities (Attachment 4). The City of Regan does not have the funding and staffing to incorporate robust activities in their regulations, plans, and programs.



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# Burleigh County Multi-Hazard Mitigation Plan Attachments



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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 Continued 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      |      |
| Transition Lagoon to Municipal Wastewater      |                   |                    |             |             |         |      | X     |                  | X                   | X                                        | X             | X             |               |                | X               |         |       |        |          |     |        | X    |

| Mitigation Projects            |        |                                                                                                                                                              |                                                                                                                                                                                                                                                                          |                                                                                                                                                       |                              |                                                                                       |           |                                      |          |
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| Jurisdiction                   | Hazard | Description                                                                                                                                                  | Range of Actions<br>(preferred action shown first if more than one listed)                                                                                                                                                                                               | Lead and Support<br>Agency(s)/Position(s)<br>Leads in Bold                                                                                            | Cost                         | Funding Source                                                                        | Timeframe | Progress                             | Priority |
| Burleigh County,<br>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.                                                                                                                                                                      | <b>Burleigh Emergency Manager</b><br>Fire Districts<br>Bismarck/Burleigh Public Health Dir.<br>Burleigh Sheriff's Office<br>Lincoln Police Department | \$5,000                      | Burleigh Emergency Management Budget<br>Hazard Mitigation Grant Program               | Annually  | 2003 and Ongoing                     | Medium   |
| Burleigh County,<br>All Cities | All    | Evaluate County Website: Improve to serve as central repository for information gathering and dissemination.                                                 | Accessibility<br>Yearly Scan                                                                                                                                                                                                                                             | <b>Burleigh Emergency Manager</b>                                                                                                                     | \$2,500                      | Burleigh Emergency Management Budget                                                  | Yearly    | 2025 and Ongoing                     | Low      |
| Burleigh County,<br>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.                                                                                                                                                     | <b>Burleigh Emergency Manager</b>                                                                                                                     | \$500                        | Burleigh County Emergency Management Budget                                           | Annually  | 2003 and Ongoing                     | Medium   |
| Burleigh County,<br>All Cities | All    | GIS Maps: Maintain Addressing, City Maps, Floodplains, Key Facilities, aerial photos.                                                                        | Continue to staff a GIS person within Burleigh County                                                                                                                                                                                                                    | <b>Burleigh Highway Department - GIS Analyst</b>                                                                                                      | \$100,000                    | Burleigh Highway Dept Budget                                                          | 1-3 Years | 2010 and Ongoing                     | Medium   |
| Burleigh County,<br>All Cities | All    | MHMP: Maintain plan information and update every five years.                                                                                                 | <ul style="list-style-type: none"><li>• Maintain updates with staff.</li><li>• Contract the 5-year update.</li></ul>                                                                                                                                                     | <b>Burleigh Emergency Manager</b>                                                                                                                     | \$1,000                      | Burleigh Emergency Management Budget<br>Hazard Mitigation Grant Program               | 3-5 Years | 2003 and Ongoing                     | Medium   |
| Burleigh County,<br>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                                                                                                                                                                                                                         | <b>Burleigh Emergency Manager</b><br>Bismarck/Burleigh Public Health Dir.<br>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                                                                                                                                                                                                                                | <b>Lincoln Commission</b><br>Lincoln Police Dept                                                                                                      | TBD<br>(in discussion phase) | Wing Sales Tax<br>Wing General Fund<br>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. <ul style="list-style-type: none"><li>• Generator (natural gas)</li><li>• Battery</li></ul> | <b>Lincoln Commission</b><br>Burleigh Emergency Manager                                                                                               | \$50,000                     | Lincoln General Fund<br>Hazard Mitigation Grant Program                               | 1-2 Years | 2025 Grant Award<br>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. <ul style="list-style-type: none"><li>• Generator (natural gas)</li><li>• Battery</li></ul>                                                                                                  | <b>Lincoln Public Works</b><br>Lincoln City Commission<br>Burleigh Emergency Manager                                                                  | \$40,000                     | Lincoln General Fund<br>Hazard Mitigation Grant Program                               | 1-2 Years | 2025 Grant Award<br>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. <ul style="list-style-type: none"><li>•Generator</li></ul>                                                                                                                             | <b>Lincoln Public Works</b><br>Lincoln City Commission<br>Burleigh Emergency Manager                                                                  | \$25,000                     | Lincoln General Fund<br>Hazard Mitigation Grant Program<br>ND Dept of Water Resources | 1-3 Years | 2020 and Ongoing                     | Medium   |

| Mitigation Projects |        |                                                                            |                                                                                                                                                                                                                                                                                                                   |                                                                                      |                  |                                                                                       |           |                                                |          |
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| Jurisdiction        | Hazard | Description                                                                | Range of Actions<br>(preferred action shown first if more than one listed)                                                                                                                                                                                                                                        | Lead and Support<br>Agency(s)/Position(s)<br>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.<br>•Generator                                                                                                                                                                                                                   | <b>Lincoln Public Works</b><br>Lincoln City Commission<br>Burleigh Emergency Manager | \$25,000         | Lincoln General Fund<br>Hazard Mitigation Grant Program<br>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.                                                                                                                                                                                                                              | <b>Lincoln Public Works</b><br>Lincoln City Commission                               | TBD              | Lincoln General Fund<br>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.<br>• Generator<br>• Battery                                                                                                                                                                                               | <b>Wilton Commission</b><br>Burleigh Emergency Manager                               | \$50,000         | Wilton General Fund<br>Hazard Mitigation Grant Program                                | 1-3 Years | 2025 Applied for Grant<br><br>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.<br>• Add additional lines and integrate system<br>• Utilize portable phones                                                                                                           | <b>Wilton Commission</b><br>Burleigh Emergency Manager                               | \$5,000          | Wilton General Fund<br>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.<br>• Contract for a digital map and printed maps                                                                                                                        | <b>Wilton Commission</b><br>Burleigh Emergency Manager                               | \$2,000          | Wilton General Fund<br>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.<br>• Generator<br>• Battery                                                                                                                                                                                                                          | <b>Wilton Commission</b><br>Burleigh Emergency Manager                               | \$5,000-\$10,000 | Wilton General Fund<br>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).                                 | <b>Wing Commission</b><br>Burleigh Emergency Manager                                 | \$3,000-\$5,000  | Wing General Fund<br>Homeland Security Grant<br>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.<br>• Generator 10 kW<br>• Battery | <b>Wing Commission</b><br>Burleigh Emergency Manager                                 | \$30,000         | Wing General Fund<br>Hazard Mitigation Grant Program                                  | 1-3 Years | 2020 and Ongoing                               | High     |



| Mitigation Projects         |                                                        |                                                                                                          |                                                                                                                                                            |                                                                                                                                                                                                               |                   |                                                                                                                             |                               |                  |          |
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| Jurisdiction                | Hazard                                                 | Description                                                                                              | Range of Actions<br>(preferred action shown first if more than one listed)                                                                                 | Lead and Support<br>Agency(s)/Position(s)<br>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.<br>• Generator (fixed outside)<br>• Battery                                                     | <b>Wing Commission</b><br>Burleigh Emergency Manager                                                                                                                                                          | \$30,000-\$50,000 | Wing General Fund<br>Hazard Mitigation Grant Program<br>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.<br>• Generator (10 kW fixed outside)<br>• Battery              | <b>Wing Commission</b><br>Burleigh Emergency Manager                                                                                                                                                          | \$30,000-\$50,000 | Wing General Fund<br>Hazard Mitigation Grant Program<br>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.<br>• Generator (fixed outside)<br>• Battery | <b>Wing Commission</b><br>Burleigh Emergency Manager                                                                                                                                                          | \$10,000-\$15,000 | Wing General Fund<br>Hazard Mitigation Grant Program<br>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.<br>• Insulate (spray foam) and heat (radiant heat)         | <b>Wing Commission</b><br>Burleigh Emergency Manager                                                                                                                                                          | \$75,000          | Wing General Fund<br>Hazard Mitigation Grant Program                                                                        | 1-3 Years                     | 2020 and Ongoing | Medium   |
| Burleigh County, All Cities | Civil Disturbance<br>Criminal Terrorist<br>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                                                                                           | <b>Burleigh Sheriff's Office</b><br><b>Lincoln Police</b><br>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                                                                               | <b>Burleigh Emergency Manager</b><br><b>Burleigh Water Resource District</b>                                                                                                                                  | Staff Time        | Free                                                                                                                        | Annually<br>(Dam Safety Week) | 2026 and Ongoing | Medium   |
| Burleigh County, All Cities | Dam Failure<br>Flood                                   | National Flood Insurance Program (public): Promote public participation in the program.                  | Continue to inform public regarding flood insurance.                                                                                                       | Lincoln Commission<br>Wilton Commission<br>Wing Commission<br><b>Burleigh Floodplain Administrator</b><br>Burleigh Commission<br><b>Burleigh Emergency Manager</b><br><b>Burleigh Water Resource District</b> | \$500             | Burleigh Emergency Management Budget<br>Burleigh Building/Planning/Zoning Budget<br>Burleigh Water Resource District Budget | Ongoing                       | 2003 and Ongoing | Medium   |

| Mitigation Projects      |                   |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                      |                              |                                                                                     |                                                                                                                                                         |                         |          |
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| Jurisdiction             | Hazard            | Description                                                                                                                                                                                                                                                                                             | Range of Actions<br>(preferred action shown first if more than one listed)                                                                                                                                                                                                                                                                                                         | Lead and Support<br>Agency(s)/Position(s)<br>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<br>Burleigh Emergency Manager<br><b>Burleigh Floodplain Manager</b>              | \$20,000<br>Staff Time       | Burleigh Building/Planning/Zoning Budget<br>Burleigh Water Resource District Budget | Ongoing                                                                                                                                                 | 2024<br>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.<br><br>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. | <b>Burleigh Water Resource District</b>                                                              | \$2,000,000                  | ND Department of Water Resources<br>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.                                                                                                                                               | <b>Burleigh Water Resource District</b>                                                              | TBD<br>(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)                                                                                                                                                                                                                                                                                                    | <b>Burleigh Highway Dept - GIS</b><br>Burleigh Emergency Manager<br>Burleigh Water Resource District | Staff Time                   | Burleigh Highway Department Budget<br>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.<br>• Replace 4 undersized culverts<br>• Drain tile                                                                                                                                                                                                                                         | <b>Lincoln Public Works</b><br>Lincoln Commission<br>Burleigh Emergency Manager                      | TBD<br>(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<br>•Drain tile                                                                                                                                                                                                                                                                                                                                         | <b>Lincoln Public Works</b><br>Lincoln Commission<br>Burleigh Emergency Manager                      | TBD<br>(in discussion phase) | City of ND Department of Water Resources                                            | 1-2 Years                                                                                                                                               | 2020 and Ongoing        | High     |

| Mitigation Projects               |                      |                                                                                                                                                                                |                                                                                                                                                                                           |                                                                                                                                                                                                      |                      |                                                                                                                                                                                       |           |                     |          |
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| Jurisdiction                      | Hazard               | Description                                                                                                                                                                    | Range of Actions<br>(preferred action shown first if more than one listed)                                                                                                                | Lead and Support<br>Agency(s)/Position(s)<br>Leads in Bold                                                                                                                                           | Cost                 | Funding Source                                                                                                                                                                        | Timeframe | Progress            | Priority |
| Regan                             | Dam Failure<br>Flood | National Flood Insurance Program:<br>Promote participation in the program.                                                                                                     | Continue to foster with Regan.                                                                                                                                                            | Regan Commission<br><b>Burleigh Emergency Manager</b><br>Burleigh Floodplain Administrator                                                                                                           | \$500                | Burleigh Building/Planning/Zoning Budget<br>Burleigh Water Resource District Budget                                                                                                   | Ongoing   | 2003 and<br>Ongoing | Low      |
| Burleigh<br>County,<br>All Cities | Drought              | Drought Awareness: Inform public of<br>critical water supplies and water bans<br>during drought.                                                                               | <ul style="list-style-type: none"><li>• Publish information via flyers, newspaper,<br/>website, and social media.</li><li>• Encourage installation of water-saving<br/>devices.</li></ul> | Lincoln Commission<br>Regan Commission<br>Wilton Commission<br>Wing Commission<br>Burleigh Commission<br><b>Burleigh Emergency Manager</b><br><b>Burleigh Extension Service</b>                      | \$500                | Burleigh Emergency Management Budget<br>Lincoln General Fund Budget<br>Wilton General Fund Budget<br>Wing General Fund Budget                                                         | As Needed | 2003 and<br>Ongoing | Medium   |
| Burleigh<br>County,<br>All Cities | Drought              | Water and Soil Conservation:<br>Encourage the agricultural community<br>to implement water and soil<br>conservation practices                                                  | Continue to inform agricultural participants<br>on the value of crops and livestock<br>preservation during drought.                                                                       | <b>Burleigh Extension Service</b>                                                                                                                                                                    | ﻿\$,1000             | Burleigh Emergency Management Budget<br>Burleigh Extension Budget<br>Lincoln General Fund Budget<br>Wilton General Fund Budget<br>Wing General Fund Budget                            | Ongoing   | 2003 and<br>Ongoing | Medium   |
| Burleigh<br>County,<br>All Cities | Drought<br>Fire      | Fire Index/Drought Conditions: Inform<br>community of fire danger index,<br>burning regulations, and burn<br>restrictions (when instituted)                                    | Continue to provide information via<br>newspaper, website, and social media                                                                                                               | <b>Burleigh Emergency Manager</b><br>Bismarck Rural Fire<br>Sterling Rural Fire<br>Wilton Rural Fire<br>Wing Rural Fire<br>Burleigh Sheriff's Office<br>Lincoln Police Dept                          | \$100                | Burleigh Emergency Management Budget                                                                                                                                                  | As Needed | 2003 and<br>Ongoing | Medium   |
| Burleigh<br>County,<br>All Cities | Fire                 | Fire Lines: Promote the utilization of<br>fire lines into heavily wooded areas and<br>or inaccessible areas.                                                                   | Promote firewise safety practices.                                                                                                                                                        | <b>Bismarck Rural Fire</b><br><b>Sterling Rural Fire</b><br><b>Wilton Rural Fire</b><br><b>Wing Rural Fire</b>                                                                                       | \$5,000              | Bismarck Rural Fire Department Budget<br>Sterling Rural Fire Department Budget<br>Wilton Rural Fire Department Budget<br>Wing Rural Fire Department Budget<br>ND Forest Service Grant | Annually  | 2015 and<br>Ongoing | Low      |
| Burleigh<br>County,<br>All Cities | Fire                 | Fuel Reduction: Continue fuel<br>reduction on the USFWS District,<br>particularly the WUI; the USFWS<br>performs prescription burning on<br>approximately 1000 acres per year. | Prescription burns and education on haying<br>and grazing to reduce fuels.                                                                                                                | <b>Bismarck Rural Fire</b><br><b>Sterling Rural Fire</b><br><b>Wilton Rural Fire</b><br><b>Wing Rural Fire</b><br><b>ND Forest Service</b><br><b>ND Game and Fish</b><br><b>US Fish and Wildlife</b> | \$5,000-<br>\$10,000 | Bismarck Rural Fire Department Budget<br>Sterling Rural Fire Department Budget<br>Wilton Rural Fire Department Budget<br>Wing Rural Fire Department Budget<br>ND Forest Service Grant | Annually  | 2010 and<br>Ongoing | Low      |

| Mitigation Projects            |        |                                                                                                                                     |                                                                                                                                                                                                                                                               |                                                                                                                                                                       |                              |                                                                  |           |                  |          |
|--------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------|-----------|------------------|----------|
| Jurisdiction                   | Hazard | Description                                                                                                                         | Range of Actions<br>(preferred action shown first if more than one listed)                                                                                                                                                                                    | Lead and Support<br>Agency(s)/Position(s)<br>Leads in Bold                                                                                                            | Cost                         | Funding Source                                                   | Timeframe | Progress         | Priority |
| Burleigh County,<br>All Cities | Fire   | Community Wildfire Protection Plan: Review and Update.                                                                              | Continue to review and update the current CWPP.                                                                                                                                                                                                               | <b>Burleigh Emergency Manager</b><br>Bismarck Rural Fire<br>Sterling Rural Fire<br>Wilton Rural Fire<br>Wing Rural Fire                                               | Staff Time                   | Staff Time                                                       | Annually  | 2003 and Ongoing | Low      |
| Burleigh County,<br>All Cities | Fire   | Defensible Space: Promote the use of defensible space to help protect structures.                                                   | Promote firewise safety practices.                                                                                                                                                                                                                            | <b>Bismarck Rural Fire</b><br><b>Sterling Rural Fire</b><br><b>Wilton Rural Fire</b><br><b>Wing Rural Fire</b>                                                        | \$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.                                                                                                                                                                                              | <b>Bismarck Rural Fire</b><br><b>Sterling Rural Fire</b><br><b>Wilton Rural Fire</b><br><b>Wing Rural Fire</b><br><b>ND Forest Service</b><br><b>ND Game and Fish</b> | Staff Time                   | Bismarck Rural Fire Department Budget<br>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.<br><br>Evaluate and/or create defensible space around critical infrastructure to include removal of debris accumulation.                                                                                                   | <b>Wilton Rural Fire</b>                                                                                                                                              | 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. <ul style="list-style-type: none"><li>• Railways</li><li>• Lagoon</li><li>• North side of City</li></ul> | <b>Wilton Rural Fire</b>                                                                                                                                              | 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.                                                                                              | <b>Wing Commission</b><br>Wing Rural Fire                                                                                                                             | TBD<br>(in discussion phase) | Wing General Fund<br>Possible loans (SBA)                        | Annually  | 2025             | Low      |

| Mitigation Projects                    |                     |                                                                                                                |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                      |                            |                                                                                                                                                                                                                      |           |                  |          |
|----------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------|----------|
| Jurisdiction                           | Hazard              | Description                                                                                                    | Range of Actions<br>(preferred action shown first if more than one listed)                                                                                                                                                                     | Lead and Support<br>Agency(s)/Position(s)<br>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                                                                                                                                                                                                                   | <b>Lincoln Commission</b><br><b>Wilton Commission</b><br><b>Wing Commission</b><br><b>Burleigh Floodplain Administrator</b><br>Burleigh Commission<br>Burleigh Emergency Manager<br>Burleigh Water Resource District | \$1,000                    | Burleigh Emergency Management Budget<br>Burleigh Building/Planning/Zoning Budget<br>Burleigh Water Resource District Budget<br>Lincoln General Fund Budget<br>Wilton General Fund Budget<br>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.<br>• Culvert<br>• Grade Raise<br>• Culvert and Grade Raise                                                                                                                                                       | <b>Burleigh Highway Dept</b><br>Burleigh Water Resource District                                                                                                                                                     | \$50,000                   | Burleigh Highway Department Budget<br>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).<br>• Install box culvert – need to address downstream flow. Technical assistance from Water Management District concerning overall hydraulic benefit.<br>• Close road during inundation | <b>Burleigh Highway Dept</b><br>Burleigh Water Resource District                                                                                                                                                     | \$2,000,000                | Burleigh Highway Department Budget<br>Burleigh Water Resource District Budget                                                                                                                                        | 2030      | 2003 and Ongoing | Low      |
| Lincoln                                | Flood               | Culvert Cleaning                                                                                               | Ensure culverts are free of debris.                                                                                                                                                                                                            | <b>Lincoln Public Works</b>                                                                                                                                                                                          | \$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.<br><br>Monthly drone monitoring                                                                                                                                      | <b>Burleigh Highway Dept</b>                                                                                                                                                                                         | TBD<br>(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.<br><br>Monthly drone monitoring                                                                                                                                                                  | <b>Burleigh Highway Dept</b><br><b>Burleigh Water Resource District</b>                                                                                                                                              | TBD<br>(based on activity) | Burleigh Highway Department Budget<br>Burleigh Water Resource District Budget                                                                                                                                        | Annually  | 2015 and Ongoing | Low      |
| Burleigh County, All Cities            | Geologic Hazards    | Radon Awareness                                                                                                | Social Media Campaign (Radon Kits Available)                                                                                                                                                                                                   | <b>Burleigh Emergency Manager</b>                                                                                                                                                                                    | Staff Time                 | Bismarck/Burleigh Public Health<br>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                                                                                                                                                                                 | <b>Burleigh Emergency Manager</b><br>Bismarck Rural Fire<br>Sterling Rural Fire<br>Wilton Rural Fire<br>Wing Rural Fire<br>Burleigh Sheriff's Office<br>Lincoln Police Dept                                          | \$500                      | Burleigh Local Emergency Planning Committee Budget                                                                                                                                                                   | Annually  | 2003 and Ongoing | Medium   |

| Mitigation Projects            |                                                |                                                                                                                                                                |                                                                                                       |                                                                                  |            |                                                                                                 |                       |                  |          |
|--------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------|-----------------------|------------------|----------|
| Jurisdiction                   | Hazard                                         | Description                                                                                                                                                    | Range of Actions<br>(preferred action shown first if more than one listed)                            | Lead and Support<br>Agency(s)/Position(s)<br>Leads in Bold                       | Cost       | Funding Source                                                                                  | Timeframe             | Progress         | Priority |
| Burleigh County,<br>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 | <b>Bismarck/Burleigh Public Health Dir.</b><br><b>Burleigh Extension Service</b> | \$1,000    | Bismarck/Burleigh Public Health Budget<br>Burleigh Extension Budget<br>NDHHS Grants             | Annually              | 2003 and Ongoing | Medium   |
| Burleigh County,<br>All Cities | Infectious Disease and Pest Infestations       | Immunization/Vaccinations                                                                                                                                      | Immunization clinics.                                                                                 | <b>Bismarck/Burleigh Public Health Dir.</b>                                      | Staff Time | Bismarck/Burleigh Public Health Budget<br>NDHHS Grants                                          | Annually              | 2014 and Ongoing | Medium   |
| Burleigh County,<br>All Cities | Infectious Disease and Pest Infestations       | Surveillance: Monitoring trends in clinics, hospitals, and emergency rooms.                                                                                    | Continue surveillance program.                                                                        | <b>Bismarck/Burleigh Public Health Dir.</b><br>ND Health and Human Services      | Staff Time | Bismarck/Burleigh Public Health Budget<br>NDHHS Grants                                          | Annually              | 2014 and Ongoing | Medium   |
| Burleigh County,<br>All Cities | Infectious Disease and Pest Infestations       | Monitoring: Case management of communicable diseases.                                                                                                          | Continue monitoring program.                                                                          | <b>Bismarck/Burleigh Public Health Dir.</b><br>ND Health and Human Services      | Staff Time | Bismarck/Burleigh Public Health Budget<br>NDHHS Grants                                          | Annually              | 2014 and Ongoing | Medium   |
| Burleigh County,<br>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                      | <b>Burleigh Emergency Manager</b>                                                | \$500      | Burleigh Emergency Management Budget                                                            | Annually              | 2003 and Ongoing | Medium   |
| Burleigh County,<br>All Cities | Severe Summer Weather<br>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.                     | <b>Burleigh Extension Service</b>                                                | \$500      | Burleigh Extension Budget                                                                       | Annually              | 2015 and Ongoing | Medium   |
| Burleigh County,<br>All Cities | Severe Summer Weather<br>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.                                  | <b>Burleigh Extension Service</b>                                                | \$500      | Burleigh Extension Budget                                                                       | Annually              | 2015 and Ongoing | Low      |
| Burleigh County,<br>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.                                    | <b>Burleigh Emergency Manager</b>                                                | \$100      | Burleigh Emergency Management Budget                                                            | Annually              | 2003 and Ongoing | Medium   |
| Burleigh County,<br>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.       | <b>Burleigh Highway Dept</b>                                                     | Staff Time | Burleigh Highway Department Budget<br>Lincoln Public Works Budget<br>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)                              | <b>Burleigh Highway Dept</b>                                                     | 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.                                                | <b>Wilton Public Works</b>                                                       | Staff Time | Wilton Public Works Budget                                                                      | Annually or as Needed | 2020 and Ongoing | Low      |



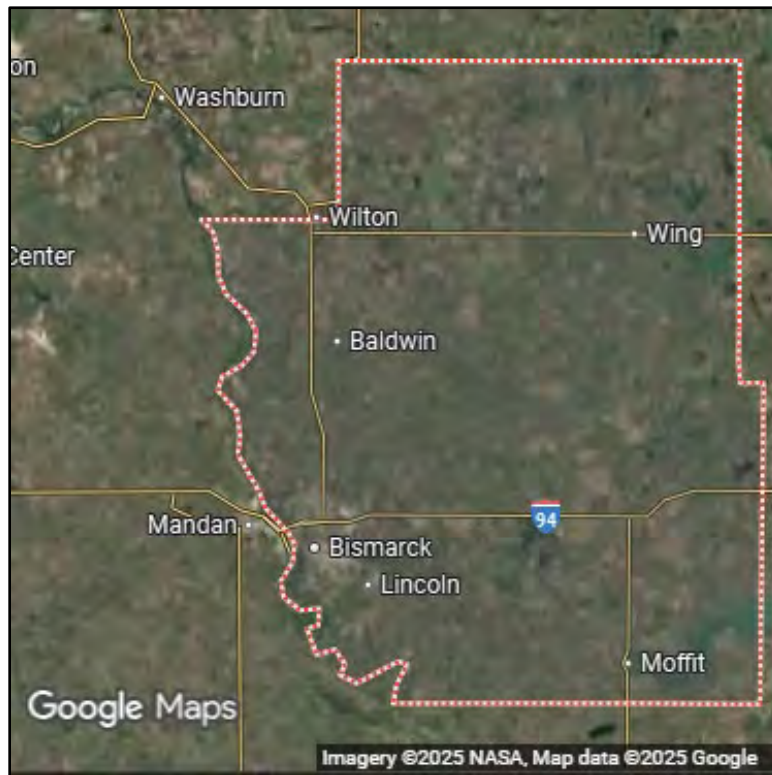
| Mitigation Projects                    |                                                                                                                        |                                                                                                                                                                |                                                                                                                        |                                                                                                                               |              |                                                                                                   |                       |                                                         |          |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------|----------|
| Jurisdiction                           | Hazard                                                                                                                 | Description                                                                                                                                                    | Range of Actions<br>(preferred action shown first if more than one listed)                                             | Lead and Support<br>Agency(s)/Position(s)<br>Leads in Bold                                                                    | Cost         | Funding Source                                                                                    | Timeframe             | Progress                                                | Priority |
| Wing                                   | Severe Summer Weather<br>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<br><b>Wing Public Works</b><br>ND Forestry                                                                    | Staff Time   | Wing General Budget<br>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.                          | <b>Wing Public Works</b>                                                                                                      | Staff Time   | Wing General Budget<br>Wing Fire Department Budget                                                | Annually or as Needed | 2015 and Ongoing                                        | Low      |
| Burleigh County,<br>All Cities         | Space Weather                                                                                                          | Space Weather: Outreach                                                                                                                                        | Communicate potential risks to community based on forecasts.                                                           | <b>Burleigh Emergency Manager</b>                                                                                             | Staff Time   | Burleigh Emergency Management Budget                                                              | As Needed             | 2019 and Ongoing                                        | Low      |
| Burleigh County,<br>All Cities         | Transportation Accident                                                                                                | Mass Casualty Planning: Update plan on a regular basis.                                                                                                        | Continue to work with local stakeholders on plan maintenance.                                                          | <b>Burleigh Emergency Manager</b><br>Bismarck/Burleigh Public Health Dir.<br>Burleigh Sheriff's Office<br>Lincoln Police Dept | \$200        | Burleigh Emergency Management Budget<br>Bismarck/Burleigh Public Health Budget                    | Annually              | 2003 and Ongoing                                        | Medium   |
| Burleigh County,<br>University of Mary | Flood, Hazardous Materials,<br>Infectious Disease & Pest Infestations,<br>Severe Summer Weather, Severe Winter Weather | University of Mary: On-campus wastewater lagoons transition to connect to the City of Bismarck's wastewater system                                             | Transition to Bismarck municipal wastewater system<br><br>Continue lagoons and expansion for additional infrastructure | <b>University of Mary</b><br>City of Bismarck                                                                                 | \$11,522,000 | FEMA's Building Resilient Infrastructure and Communities (BRIC) Grant Program, University of Mary | 2-3 years             | 2026 and Ongoing Engineering and design is 30% complete | High     |

## ATTACHMENT 2: MITIGATION PROJECTS COMPLETED

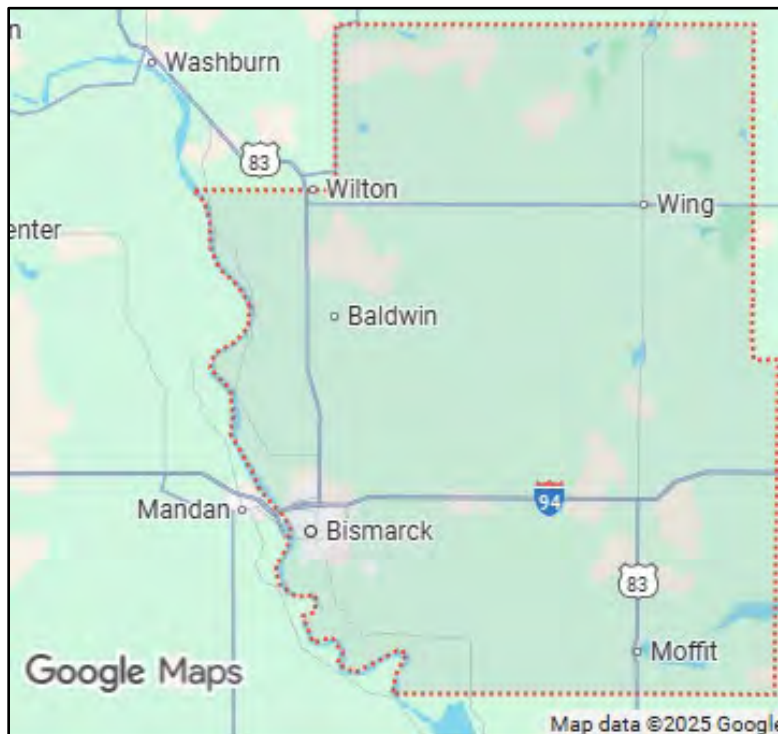
| Mitigation Projects Completed (last five years) |                  |                                                                                                              |                                                                                                                                                                                                                                                      |                                                                      |                                                       |            |                |
|-------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------|------------|----------------|
| Jurisdiction                                    | Hazard           | Description                                                                                                  | Range of Actions<br>(preferred action shown first if more than one listed)                                                                                                                                                                           | Lead Agency(s)                                                       | Funding Source                                        | Time frame | Progress       |
| Burleigh County,<br>All Cities                  | All              | Evaluate County Website: Improve to serve as central repository for information gathering and dissemination. | <ul style="list-style-type: none"> <li>• RFP for new design</li> <li>• Sole source contract through current website host</li> <li>• Develop inhouse</li> </ul>                                                                                       | County Commission<br>Emergency Mgt<br>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 soldier pile wall with tie-back system. | University of Mary<br>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<br>Emergency Mgt<br>Floodplain Administrator | NDDEQ<br>State<br>Revolving<br>Fund Program<br>(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<br>Public Works<br>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.<br>•Generator                                                                                                                                                                 | Public Works<br>City Commission<br>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.<br>•Electronic key fob doors<br>•ID Card Maker                | Police Dept<br>City Commission<br>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.<br>•Generator<br>•Battery                                                                                                                                                          | City of Wilton<br>Emergency Mgt                                      | Grants and<br>General Fund                            | 1-3 Years  | Completed 2024 |

ATTACHMENT 3: MAPS

**Burleigh County**



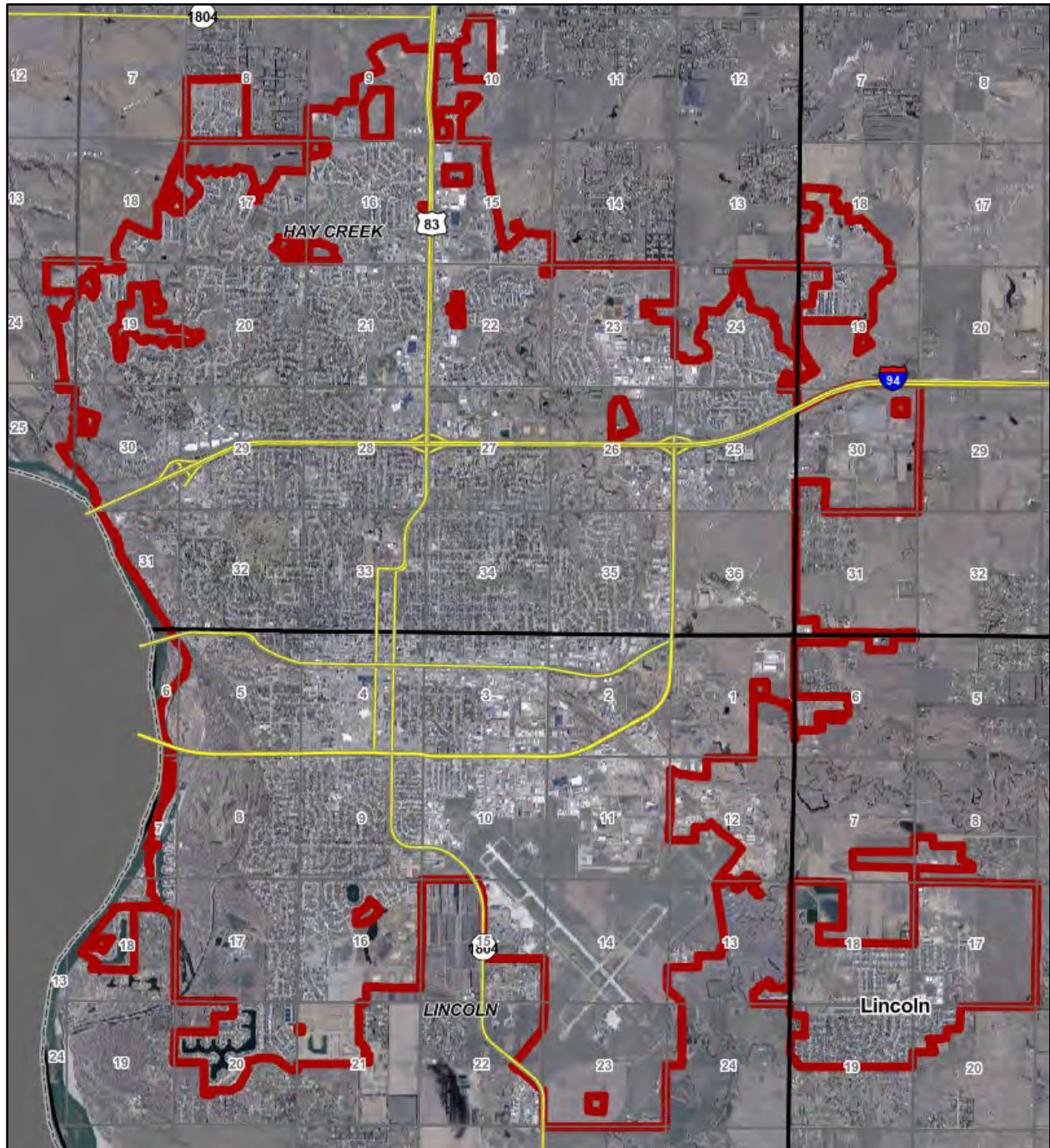
Source: Google Maps [website](https://www.google.com/maps)



Source: Google Maps [website](https://www.google.com/maps)



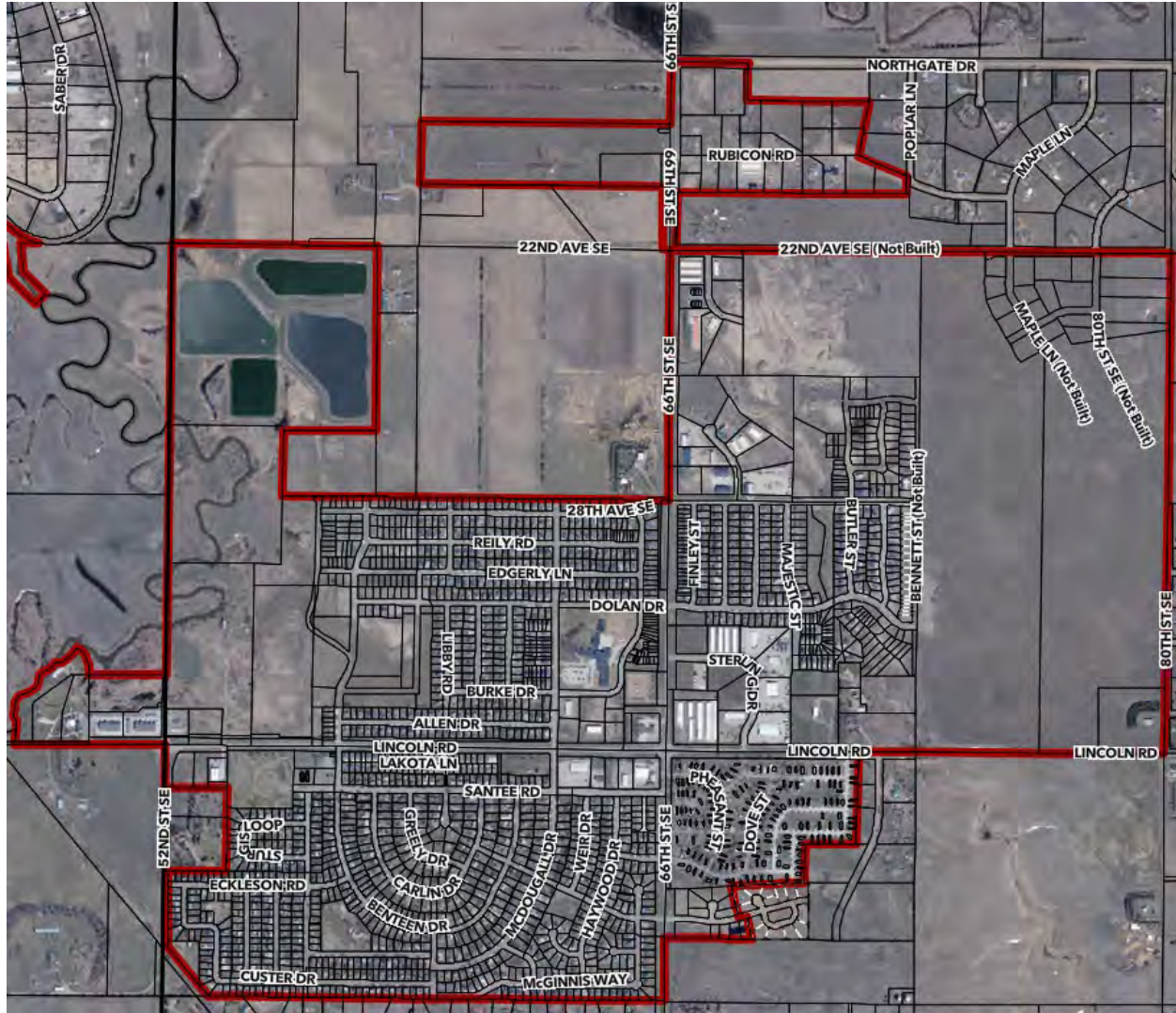
City of Bismarck



Source: Burleigh County [website](#)



## City of Lincoln



Source: Burleigh County [website](#)

City of Regan

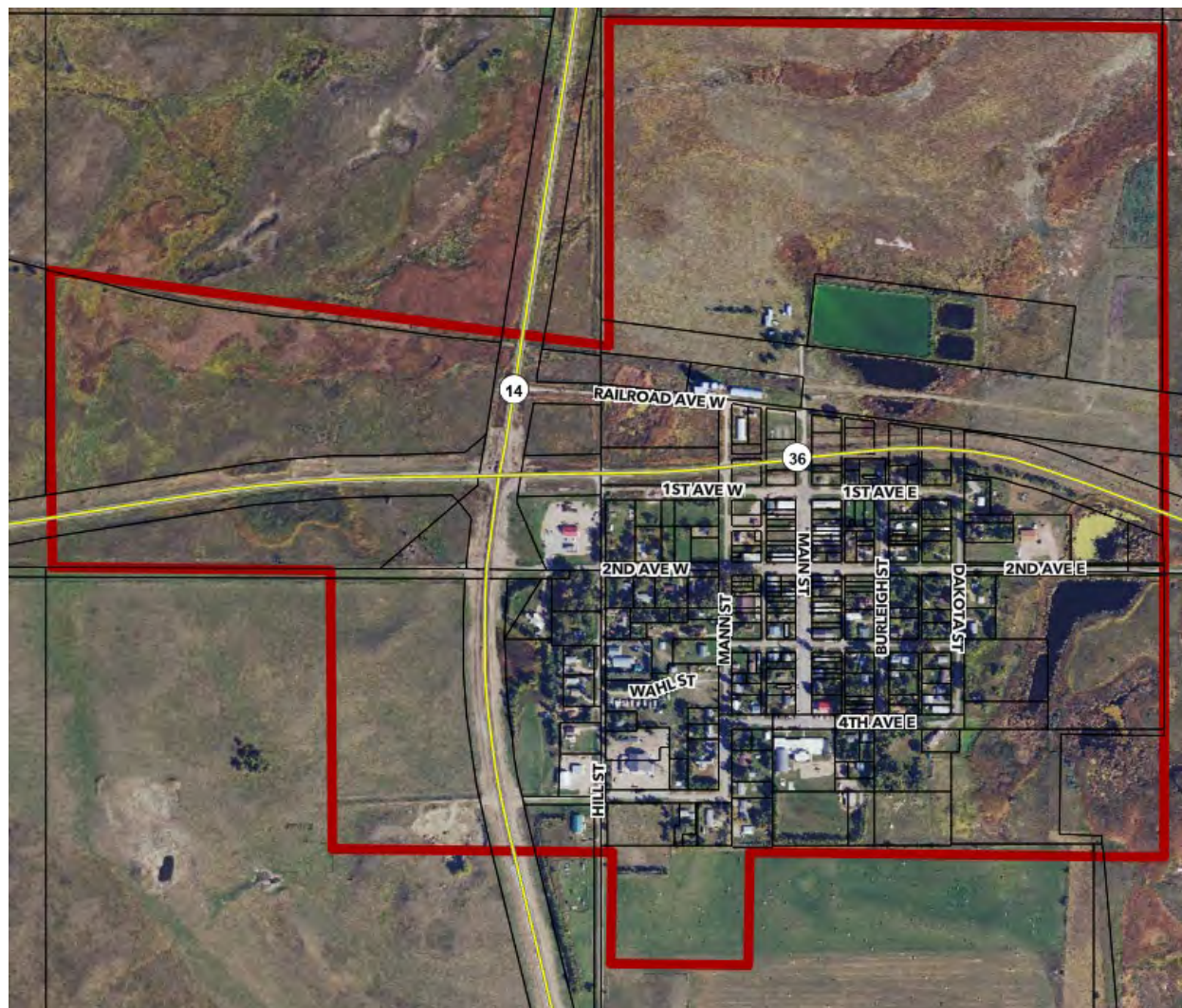


Source: Burleigh County [website](#)



Source: Burleigh County [website](#)

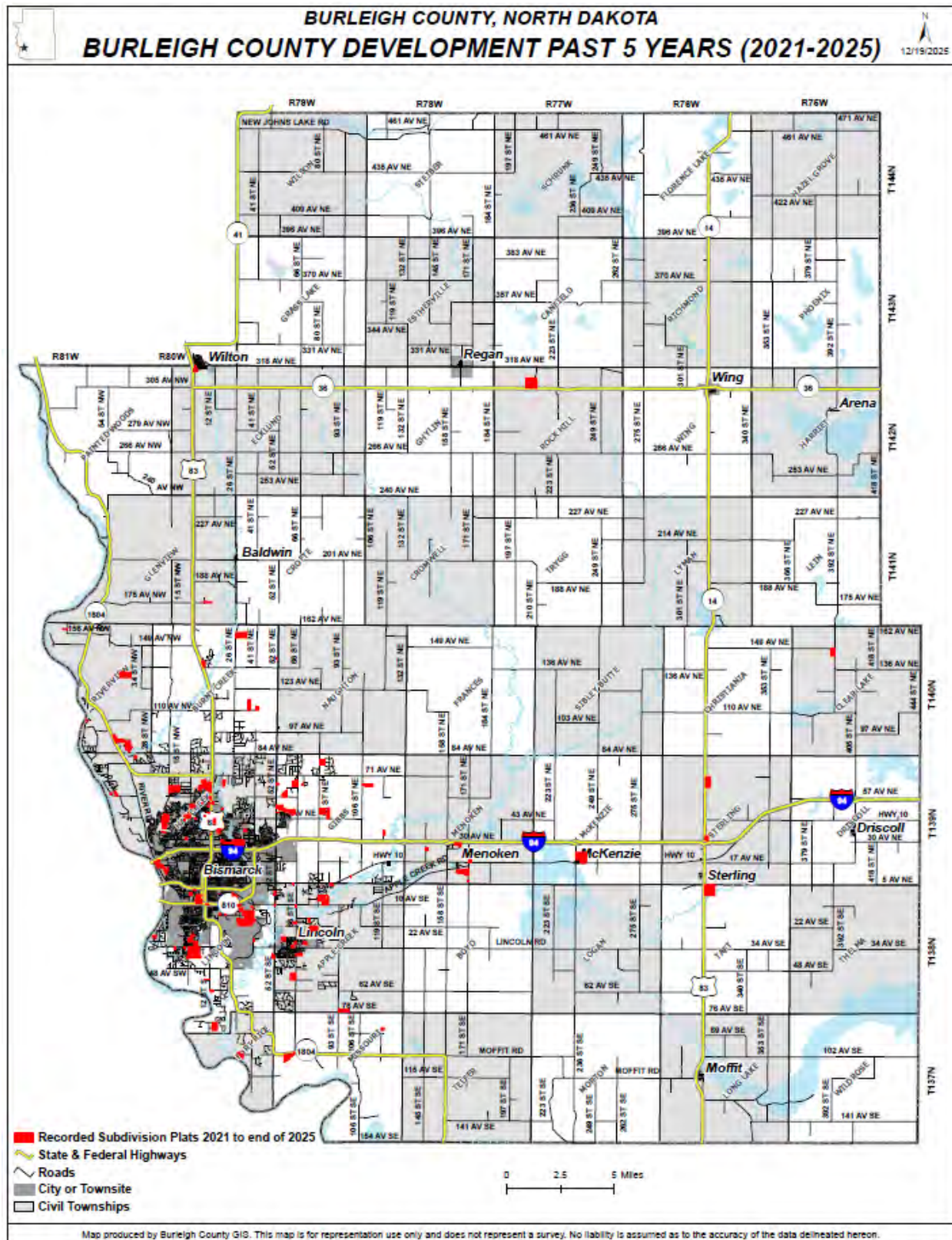
### City of Wing



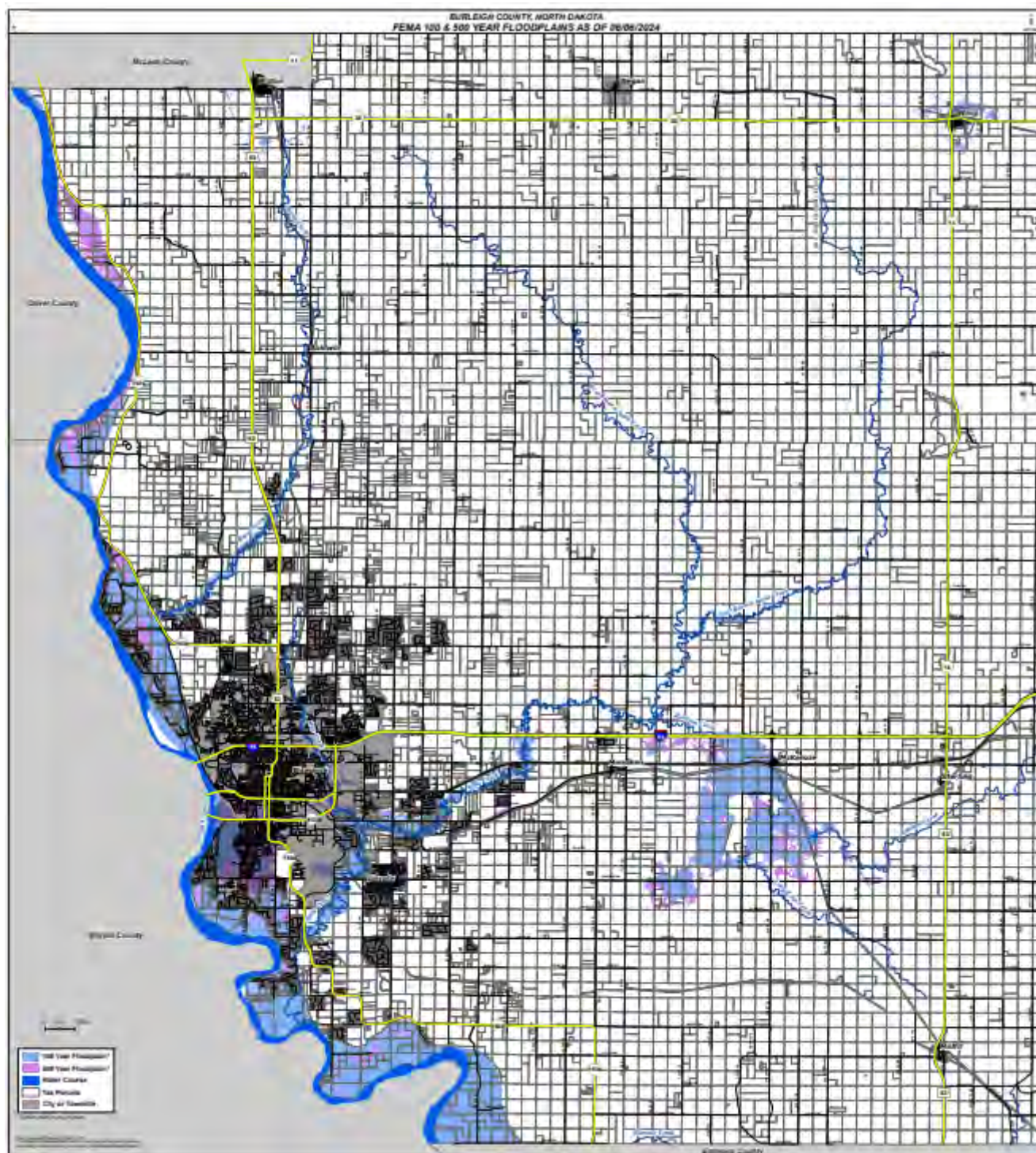
Source: Burleigh County [website](#)



## Development (2021-2025)



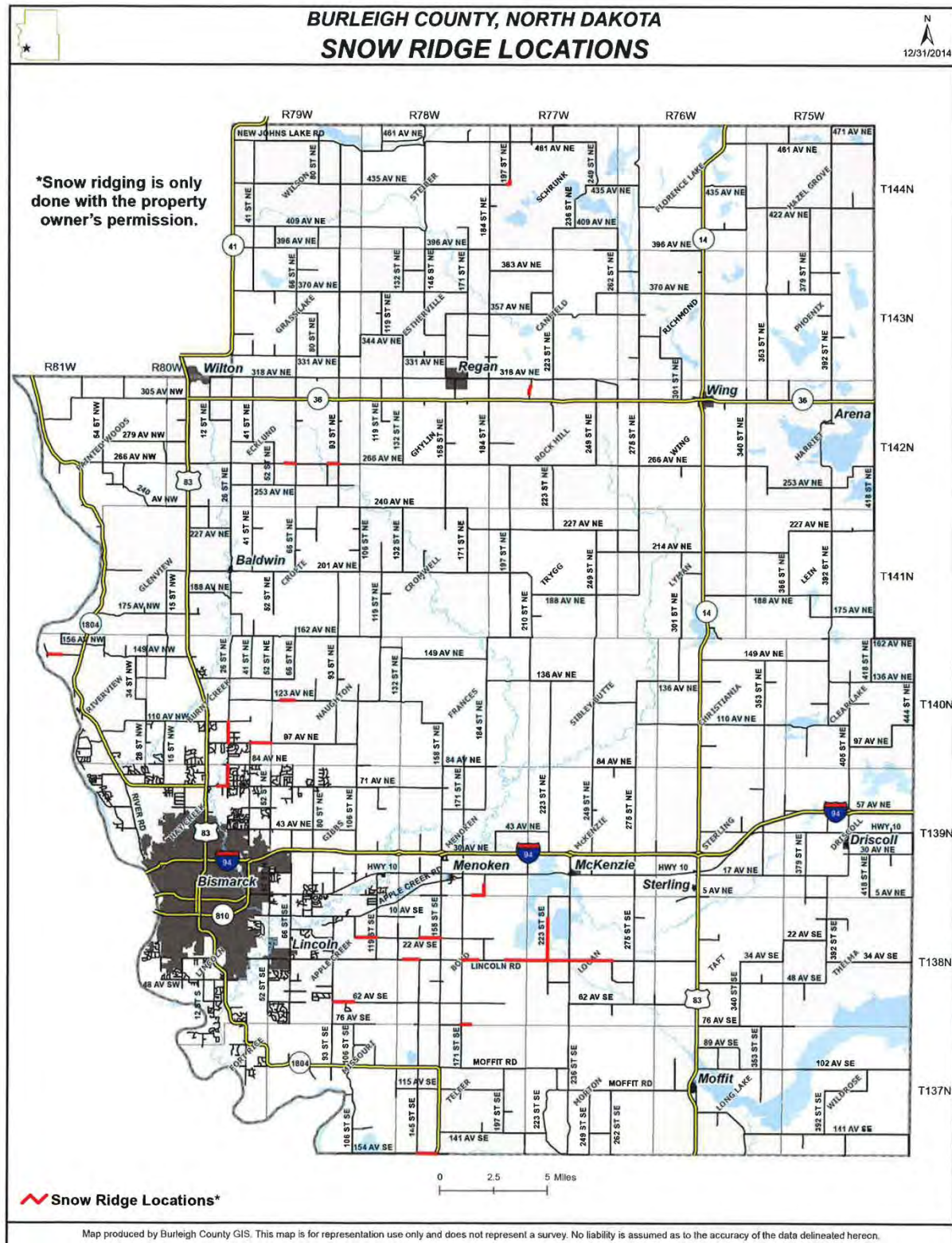


**100- and 500-Year Floodplain Map**

Source: Burleigh County [website](#)



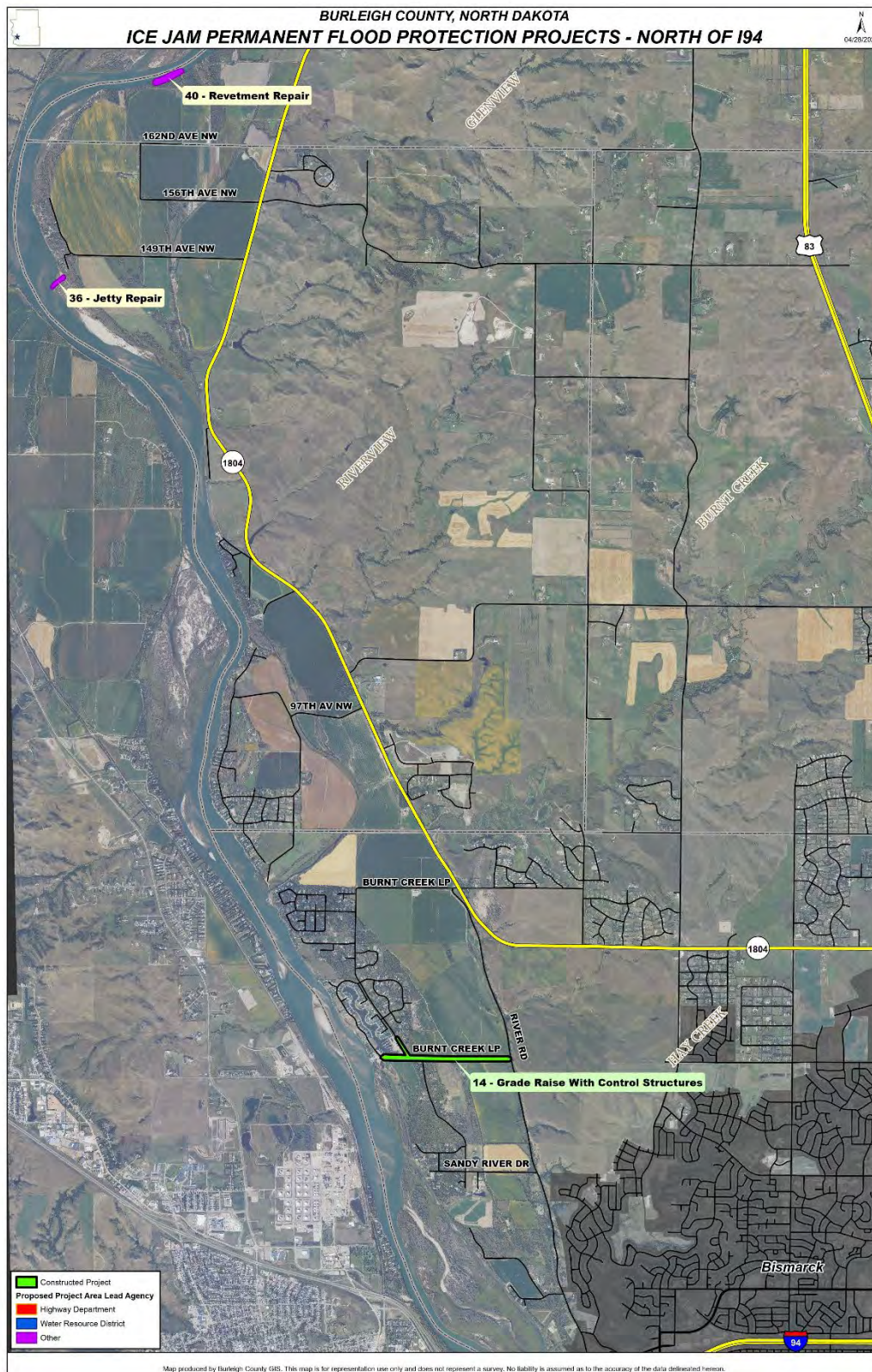
## Burleigh County Snow Ridge Locations



Source: Burleigh County GIS

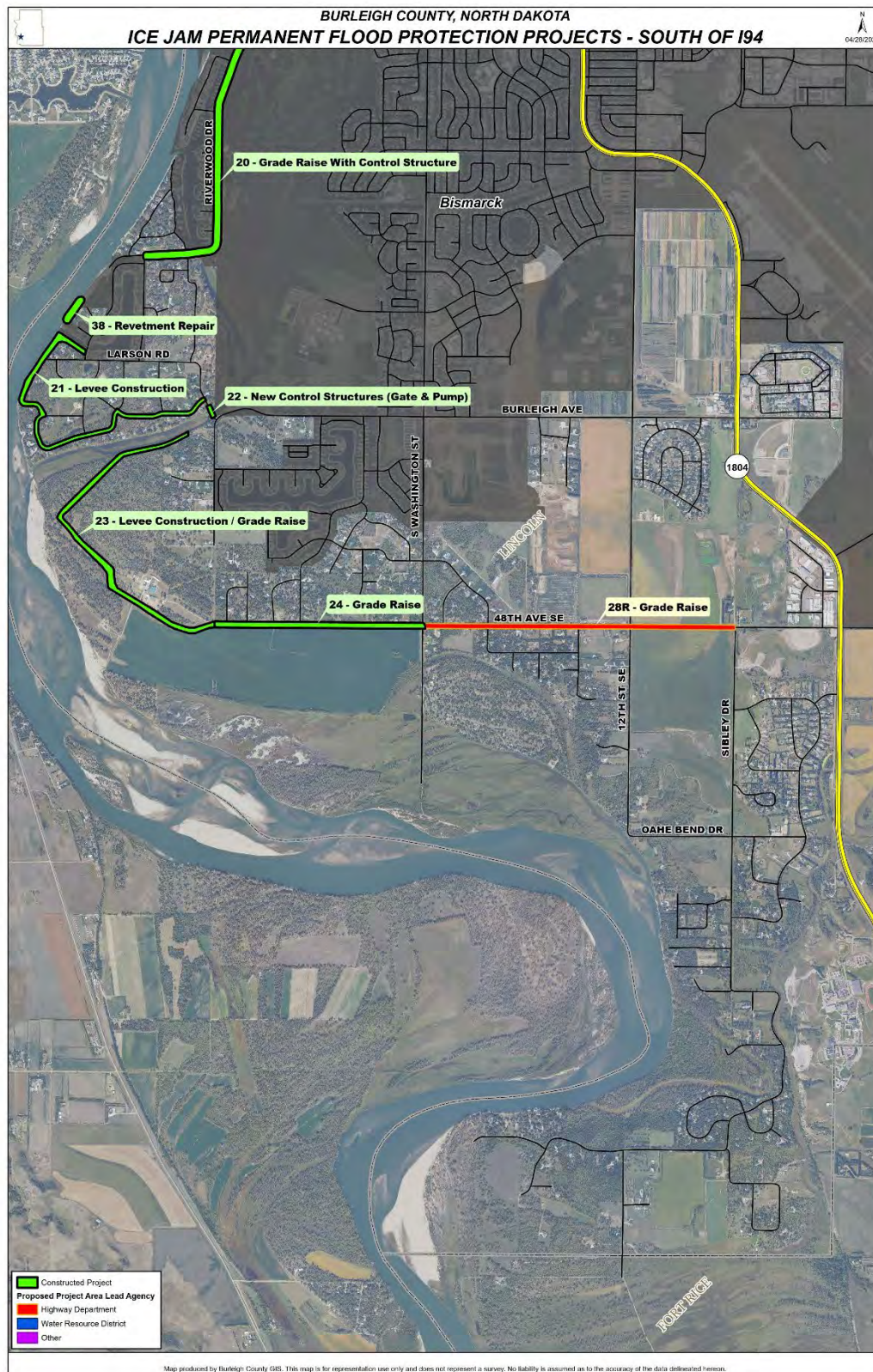


## Ice Jam Permanent Flood Protection Projects – North of Interstate 94

Source: Burleigh County [website](#)

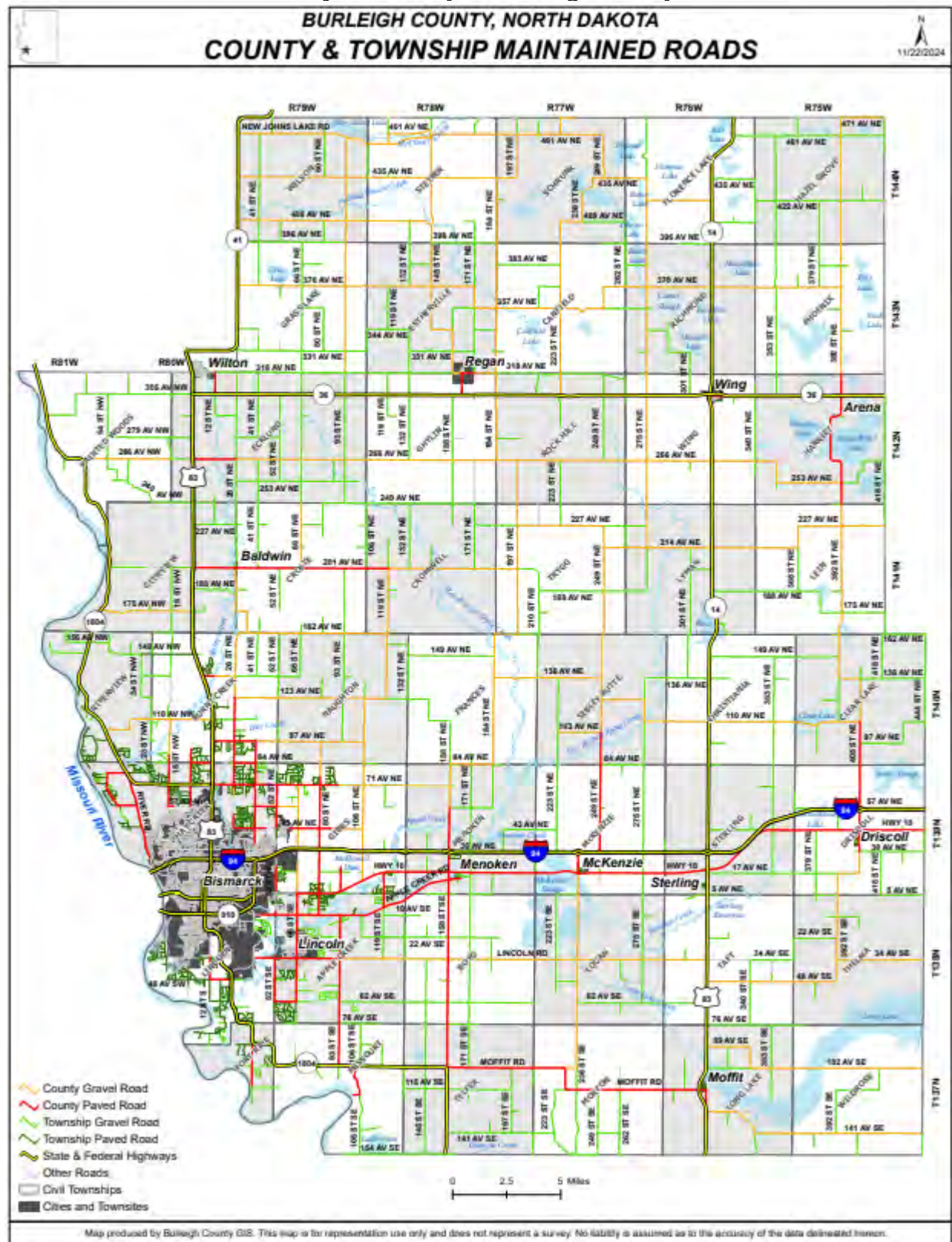


## Ice Jam Permanent Flood Protection Projects – South of Interstate 94

Source: Burleigh County [website](#)

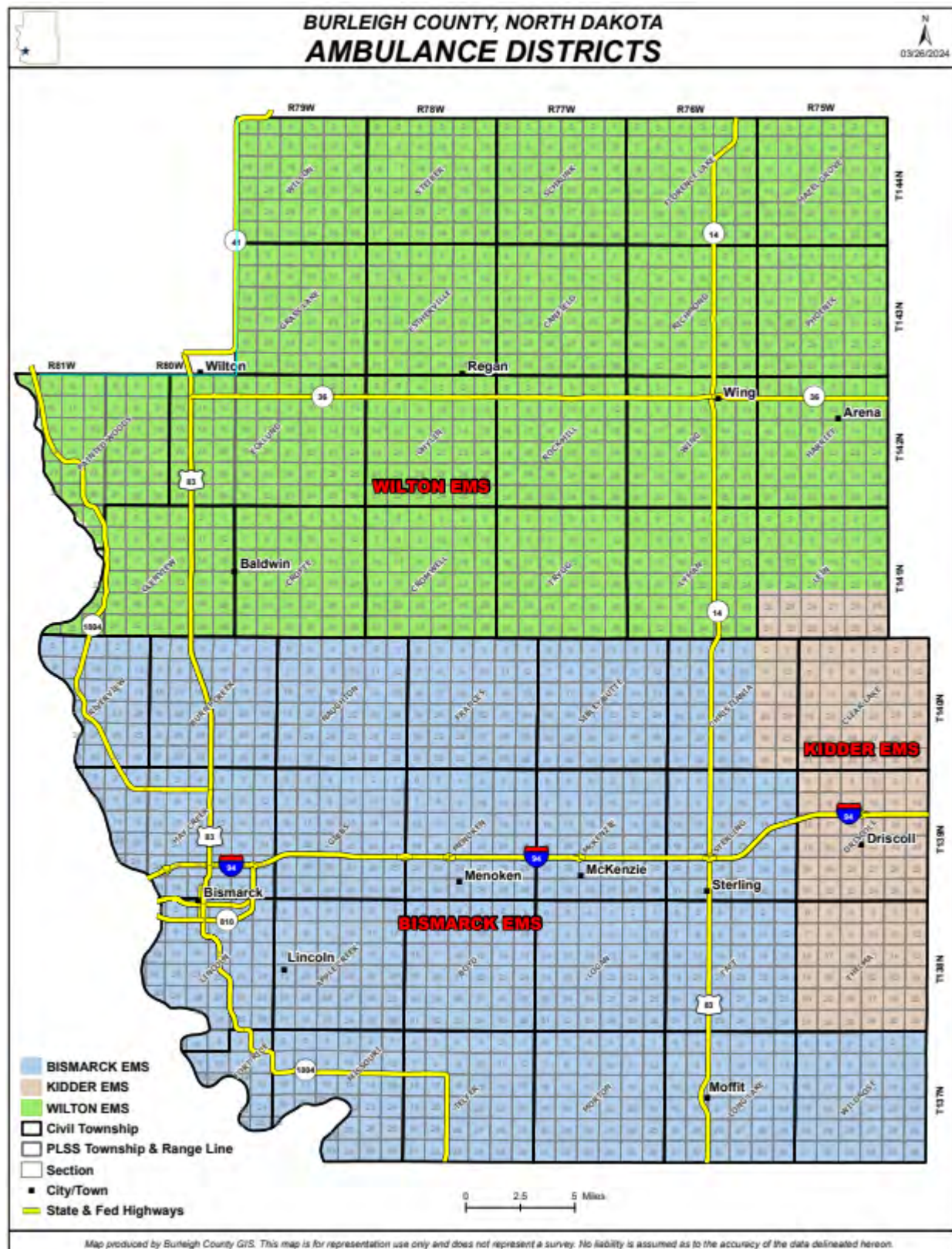


## Major Roadways in Burleigh County

Source: Burleigh County [website](#)

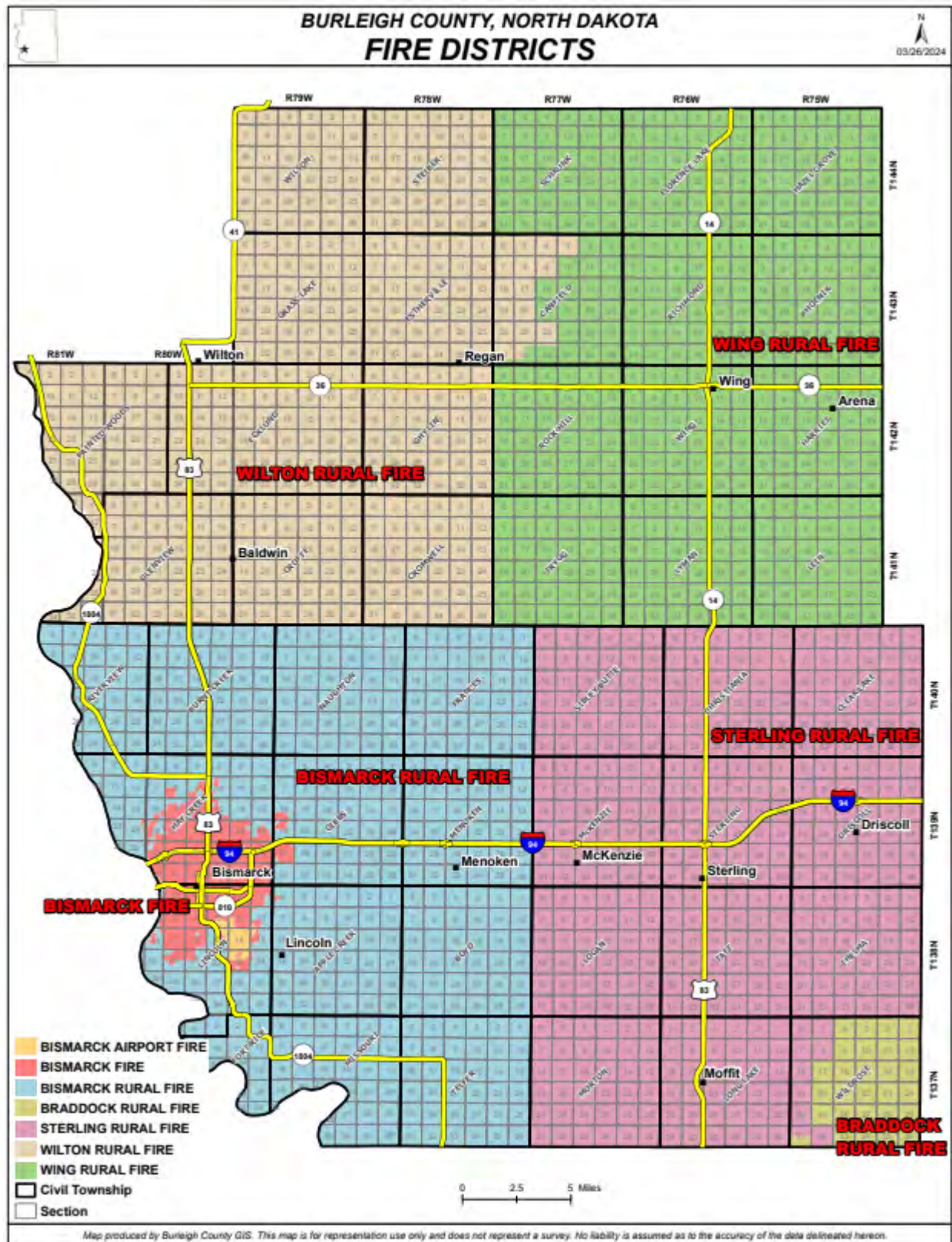


## Ambulance Response Areas

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. The City of Lincoln adopted the 2024 ND State Building Code (International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code, International Energy Conservation Code, and the International Existing Building Code as published by the International Code Council) on September 11, 2025 and effective January 1, 2026. Burleigh County adopted the same State Building Codes September 26, 2013 citing “Subsequent editions or revisions of the code adopted by the provisions of this Article shall be considered adopted and in full force and effect within the County upon the approval thereof by the Board and the filing of one copy thereof in the office of the County Building/Planning/Zoning Department. In the event of any conflict between the provisions of the code adopted by this Article and applicable provisions of state law or county ordinances, rules or regulations, the provisions of state law shall prevail and be controlling.”

Regan, Wilton, and Wing have not adopted a building code.

|                                                                                                                       | 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<br>**Partially utilize<br>***No need<br>****Lack of funds or staff<br>? Unknown<br>C Covered by County |                                      |         |       |        |      |



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

The Comprehensive Plans for Burleigh County and the City of Lincoln take into consideration potential mitigation activities and emergency management activities. The ND Century Code ([NDCC 11-33-03](#)) includes emergency management in the object of regulations “To provide for emergency management, including floodplain management as provided under section 11-11-71. "Emergency management" means a comprehensive integrated system at all levels of government and in the private sector which provides for the development and maintenance of an effective capability to mitigate, prepare for, respond to, and recover from known and unforeseen hazards or situations, caused by an act of nature or man, which may threaten, injure, damage, or destroy lives, property, or our environment.”

The County Emergency Manager maintains the Emergency Operations Plan which is reviewed every two years with a comprehensive update every five years.

The Emergency Action Plan for McDowell Dam is maintained by the Burleigh County Water Resource District with input from the County Emergency Manager. The Garrison Dam EAP is reviewed on an irregular basis with the US Army Corps of Engineers.

Land Use Ordinance also utilize knowledge and data from the mitigation plan for planning—especially floodplain ordinances.

The mitigation plan is reviewed after incidents, and yearly, with a major update every five years by the Emergency Manager with input from all jurisdictions.

### 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 Ambulance 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<br>**Partially utilize<br>****No need<br>****Lack of funds or staff<br>? 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<br>**Partially utilize<br>****No need<br>****Lack of funds or staff<br>? Unknown<br>C Covered by County |                      |         |       |        |      |

**Financial**

General fund is the main source for each jurisdiction.

|                                      | Financial          |         |       |        |      |
|--------------------------------------|--------------------|---------|-------|--------|------|
|                                      | Burleigh<br>County | Lincoln | Regan | Wilton | Wing |
| Sales tax                            | *                  | *       | **    | *      | **   |
| General fund                         | *                  | *       | *     | *      | *    |
| Community Development Block Grant    | **                 | **      | **    | **     | *    |
| Federal funding                      | *                  | *       | *     | *      | *    |
| State funding                        | *                  | *       | *     | *      | *    |
| *Fully utilize<br>**Does not utilize |                    |         |       |        |      |

## 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





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**APPENDIX B: PUBLIC INFORMATION .....ERROR! BOOKMARK NOT DEFINED.**

**APPENDIX C: PUBLIC SURVEY ..... 17**

## 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.



```
graph TD; 1[1. Organize Resources] --> 2[2. Assess Risks]; 2 --> 3[3. Develop a Mitigation Plan]; 3 --> 4[4. Implement Plan and Monitor Progress]; 4 --> 1;
```

## 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 7<sup>th</sup> St  
Bismarck, ND 58501  
701-323-6319  
[Bradley.Erickson@SanfordHealth.org](mailto:Bradley.Erickson@SanfordHealth.org)

**Crystalynn Kuntz**  
Vice Chairperson  
Bismarck-Burleigh Public Health  
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**Mary Senger**  
Secretary/Treasurer  
Burleigh County Emergency Manager  
4200 Coleman St  
Bismarck, ND 58503  
701-222-6727  
[msenger@nd.gov](mailto: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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p style="text-align: center;"><b><i>Burleigh County</i></b><br/><b>Department Head Meeting</b><br/><b>221 N. 5<sup>th</sup> St.</b><br/><b>Bismarck, ND 58501</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <table><tr><td><p><b>Auditor/Treasurer</b><br/>Mark Splonskowski</p><p><b>Building/Planning/Zoning</b><br/>Mitch Flanagan</p><p><b>Buildings &amp; Grounds</b><br/>VACANT</p><p><b>Emergency Management</b><br/>Mary Senger</p><p><b>Extension</b><br/>Kelsey Deckert</p><p><b>Finance</b><br/>Leigh Jacobs</p><p><b>Highway Department</b><br/>Marcus Hall</p><p><b>Human Resources</b><br/>Pamela Binder</p><p><b>Human Service Zone</b><br/>Chelsea Flory</p><p><b>Recorder</b><br/>Missy Hanson</p><p><b>Sheriff</b><br/>Kelly Leben</p><p><b>State's Attorney</b><br/>Julie Lawyer</p><p><b>Tax Equalization</b><br/>Al Vietmeier</p><p><b>Veterans Service</b><br/>Mark Landis</p></td><td><p><b>February 26, 2025</b><br/><b>9:00 AM</b><br/><b>1<sup>st</sup> Floor Conference Room</b><br/><b>City/County Building</b></p><p style="text-align: center;"><b>AGENDA</b></p><ol style="list-style-type: none"><li>1. Approved Vendor List - Leigh</li><li>2. Multi-Hazard Mitigation Plan Update – Mary</li><li>3. Meal Waiver Policy and Form – Pam</li><li>4. Facilities Director Position – Pam</li><li>5. HRIS/Payroll System - Pam</li><li>6. Legislative Updates - All</li></ol><p>Any other items</p></td></tr></table> | <p><b>Auditor/Treasurer</b><br/>Mark Splonskowski</p> <p><b>Building/Planning/Zoning</b><br/>Mitch Flanagan</p> <p><b>Buildings &amp; Grounds</b><br/>VACANT</p> <p><b>Emergency Management</b><br/>Mary Senger</p> <p><b>Extension</b><br/>Kelsey Deckert</p> <p><b>Finance</b><br/>Leigh Jacobs</p> <p><b>Highway Department</b><br/>Marcus Hall</p> <p><b>Human Resources</b><br/>Pamela Binder</p> <p><b>Human Service Zone</b><br/>Chelsea Flory</p> <p><b>Recorder</b><br/>Missy Hanson</p> <p><b>Sheriff</b><br/>Kelly Leben</p> <p><b>State's Attorney</b><br/>Julie Lawyer</p> <p><b>Tax Equalization</b><br/>Al Vietmeier</p> <p><b>Veterans Service</b><br/>Mark Landis</p> |
| <p><b>Auditor/Treasurer</b><br/>Mark Splonskowski</p> <p><b>Building/Planning/Zoning</b><br/>Mitch Flanagan</p> <p><b>Buildings &amp; Grounds</b><br/>VACANT</p> <p><b>Emergency Management</b><br/>Mary Senger</p> <p><b>Extension</b><br/>Kelsey Deckert</p> <p><b>Finance</b><br/>Leigh Jacobs</p> <p><b>Highway Department</b><br/>Marcus Hall</p> <p><b>Human Resources</b><br/>Pamela Binder</p> <p><b>Human Service Zone</b><br/>Chelsea Flory</p> <p><b>Recorder</b><br/>Missy Hanson</p> <p><b>Sheriff</b><br/>Kelly Leben</p> <p><b>State's Attorney</b><br/>Julie Lawyer</p> <p><b>Tax Equalization</b><br/>Al Vietmeier</p> <p><b>Veterans Service</b><br/>Mark Landis</p> | <p><b>February 26, 2025</b><br/><b>9:00 AM</b><br/><b>1<sup>st</sup> Floor Conference Room</b><br/><b>City/County Building</b></p> <p style="text-align: center;"><b>AGENDA</b></p> <ol style="list-style-type: none"><li>1. Approved Vendor List - Leigh</li><li>2. Multi-Hazard Mitigation Plan Update – Mary</li><li>3. Meal Waiver Policy and Form – Pam</li><li>4. Facilities Director Position – Pam</li><li>5. HRIS/Payroll System - Pam</li><li>6. Legislative Updates - All</li></ol> <p>Any other items</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



**BURLEIGH COUNTY WATER RESOURCE DISTRICT AGENDA****Wednesday, April 9, 2025 at 8:00 am****Tom Baker Room, 221 N. 5<sup>th</sup> 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 6<sup>th</sup> 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. 5<sup>th</sup> 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 6<sup>th</sup> 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. 5<sup>th</sup> 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. 5<sup>th</sup> 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





|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                       | <p><b>Burleigh County Emergency Management</b><br/>4200 Coleman St<br/>Bismarck ND 58503<br/>(701) 222-6727<br/>burleigh.gov</p> |
| <p><b>Multi-Hazard Mitigation Plan Review</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                  |
| <p>August 11, 2025<br/>10:00 AM<br/>City of Wing</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                  |
| <p><b>A G E N D A</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                  |
| <ol style="list-style-type: none"><li>1. Review draft mitigation plan (<a href="https://www.burleigh.gov/media/bjlha2g3/2025-burleigh-mhmp-update-reduced.pdf">https://www.burleigh.gov/media/bjlha2g3/2025-burleigh-mhmp-update-reduced.pdf</a>)<ol style="list-style-type: none"><li>a. Layout and content</li><li>b. Mitigation projects (status and anything new) and priorities</li><li>c. Mitigation capabilities</li></ol></li><li>2. Approval process</li><li>3. Grant opportunities</li></ol> |                                                                                                                                  |

**BURLEIGH COUNTY WATER RESOURCE DISTRICT AGENDA****Wednesday, August 13, 2025 at 8:00 am****Tom Baker Room, 221 N. 5<sup>th</sup> 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

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**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

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**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/bj1ha2g3/2025-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 changes
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 10<sup>th</sup>. The survey is available online at [www.burleigh.gov](http://www.burleigh.gov) and [www.bismarcknd.gov](http://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

The screenshot shows the Burleigh County website at the URL [burleigh.gov/departments/emergency-management/mitigation/](http://burleigh.gov/departments/emergency-management/mitigation/). The header includes a navigation menu with links to Government, Departments, Boards/Committees, and Contact Us. A map of Burleigh County is displayed on the left. The main content area features the title "Community Input on Mitigation Plan Update" and the following text:

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 questionnaire by April 10<sup>th</sup>. [Click here for survey.](#)

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.

## City of Bismarck Website

The screenshot shows the City of Bismarck website. The header includes a navigation menu with links to Government, Departments, Services, Community, and I Want To. A search bar and social media icons are also present. The main content area features the title "Bismarck Seeks Community Input on Mitigation Plan Update" and the following text:

The City of Bismarck and Burleigh County 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 questionnaire by April 10<sup>th</sup>. The survey is available online at both [burleigh.gov](http://burleigh.gov) and Bismarck Emergency Management.

Mitigation is defined as any action taken **BEFORE** an incident occurs in an effort 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.

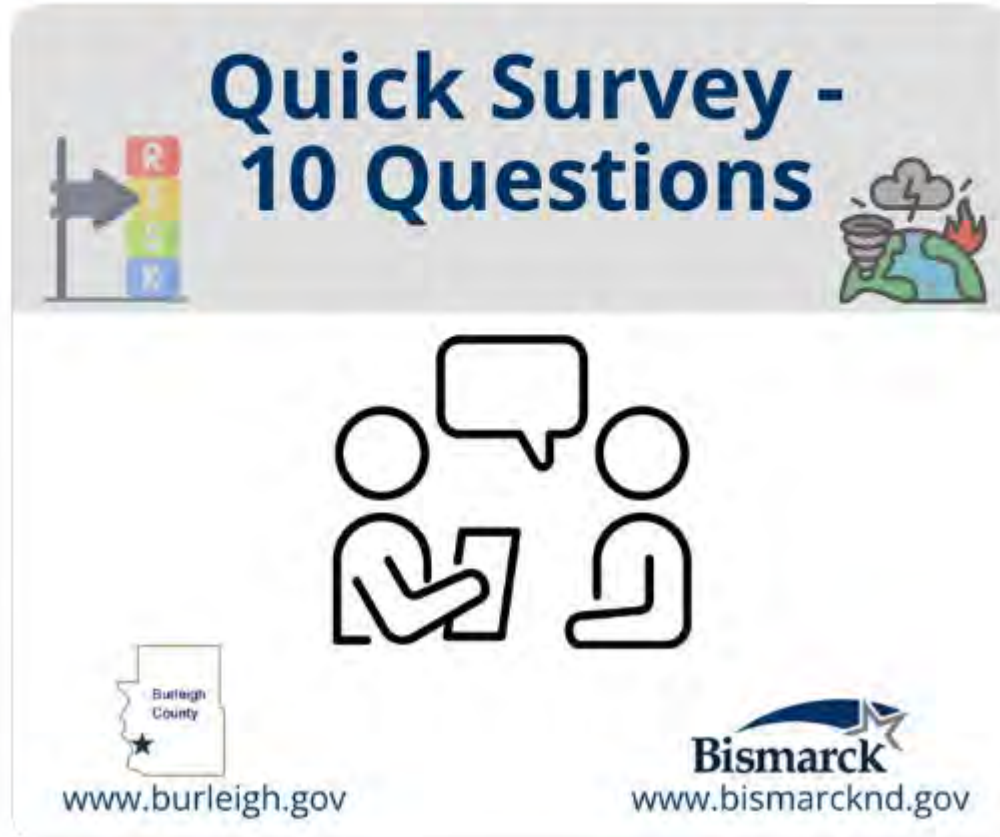


**Burleigh County Twitter****Burleigh County** @burleighco · Mar 20

Burleigh County and the City of Bismarck want your input regarding how to make our community safer from potential hazards/disasters.

Please complete the brief survey by April 10th:

[forms.office.com/g/KRLiRKQ6F0](https://forms.office.com/g/KRLiRKQ6F0)



**Burleigh County Facebook**

**Burleigh County (Bismarck)** ✓  
March 20 · 🌐

Burleigh County and the City of Bismarck want your input regarding how to make our community safer from potential hazards/disasters. We are examining the hazards facing our community as well as strategies to mitigate (reduce or eliminate) their impact.

Please complete the brief survey by April 10th: <https://forms.office.com/g/KRLiRKQ6F0>

#BurleighCo #BismarckNDGov #MHMP #PublicInput

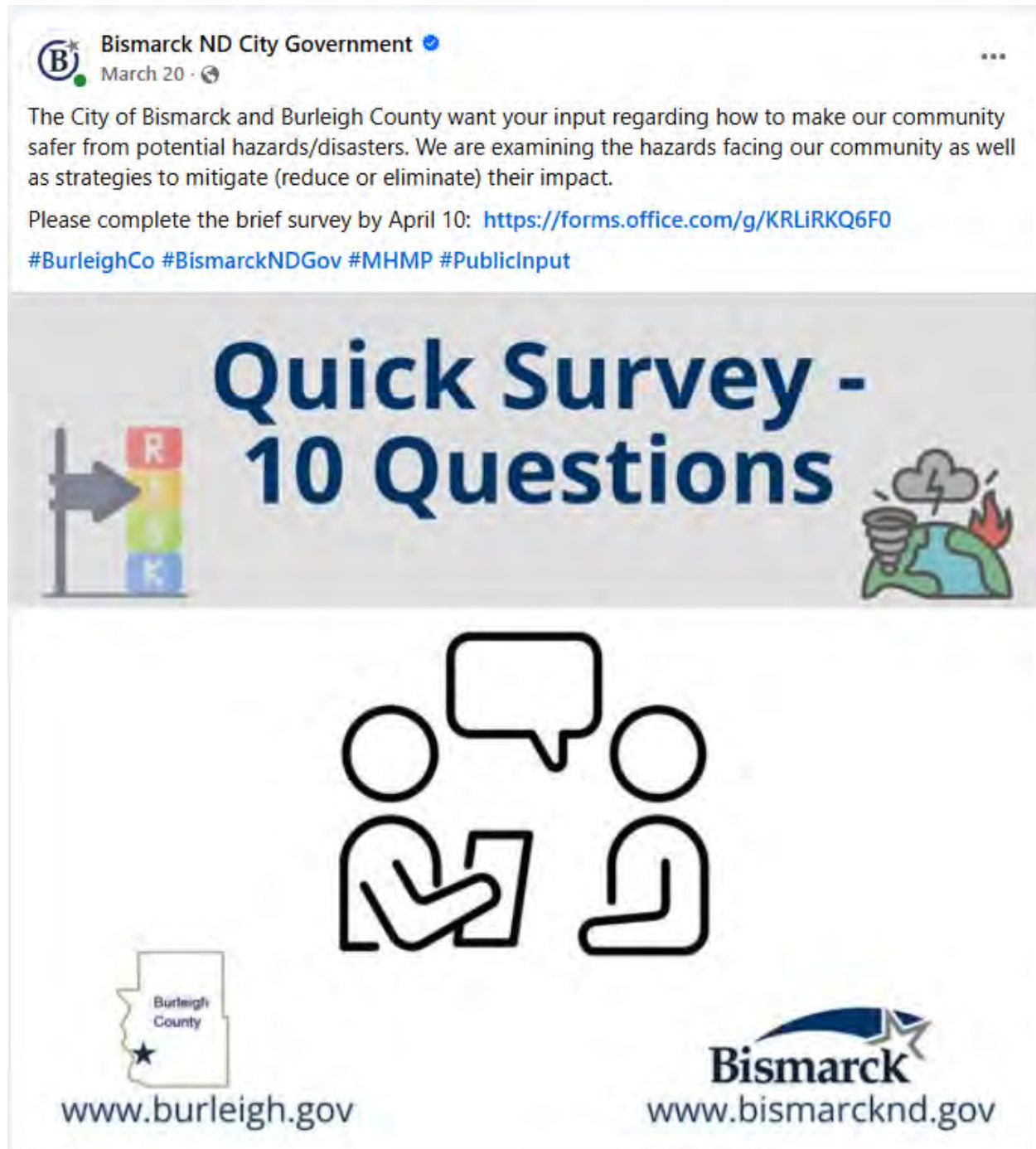
# Quick Survey - 10 Questions



www.burleigh.gov



www.bismarcknd.gov

**City of Bismarck Facebook**

**Bismarck ND City Government** ✓  
March 20 · 🌐

The City of Bismarck and Burleigh County want your input regarding how to make our community safer from potential hazards/disasters. We are examining the hazards facing our community as well as strategies to mitigate (reduce or eliminate) their impact.

Please complete the brief survey by April 10: <https://forms.office.com/g/KRLiRKQ6F0>

#BurleighCo #BismarckNDGov #MHMP #PublicInput

# Quick Survey - 10 Questions



[www.burleigh.gov](http://www.burleigh.gov)



[www.bismarcknd.gov](http://www.bismarcknd.gov)



## 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/4hpiGIs>.

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/4kWCh7>.

— Bismarck Tribune staff reports

## Dakota Media Access Television



5:45 pm  
Thu, Mar 27

NOW 61°F

FORECAST

| Fri  | Sat  | Sun  |
|------|------|------|
| 43°F | 33°F | 37°F |

**Burleigh County and the City of Bismarck Seeking Community Input on Mitigation Plan Update**

Get our new app on all your devices!

Bismarck

Citizens are invited to complete a brief survey by April 10th. Survey available at: [Burleigh.gov](https://burleigh.gov) and [BismarckND.gov](https://bismarckND.gov)

**BIG RIG 105.9** New Country Legends

[HOME](#) [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

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### 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

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### 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](http://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)



### 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](mailto:msenger@nd.gov), 701-222-6727 or Gary Stockert, City of Bismarck Emergency Manager, [gstockert@bismarcknd.gov](mailto: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

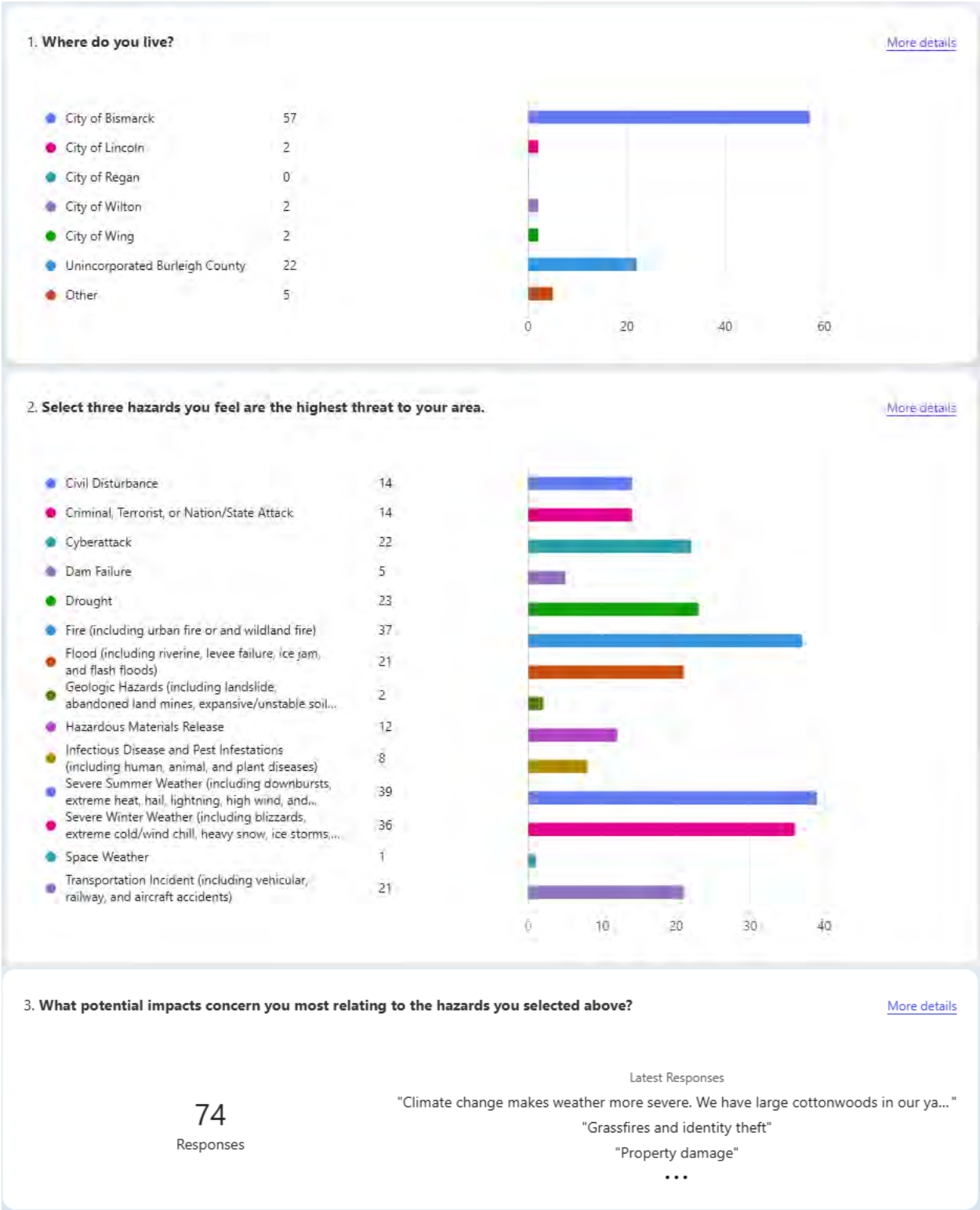
**9. What is the most effective way for you to receive information about how to make your home and area more resistant to hazards? \***

- ☐ 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





4. What preventative measure(s) would you recommend for any of the hazards you selected above to minimize or eliminate 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), what are your concerns during an incident?

[More details](#)

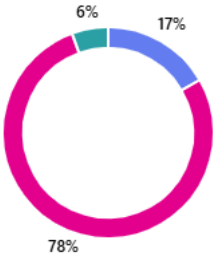
56  
Responses

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

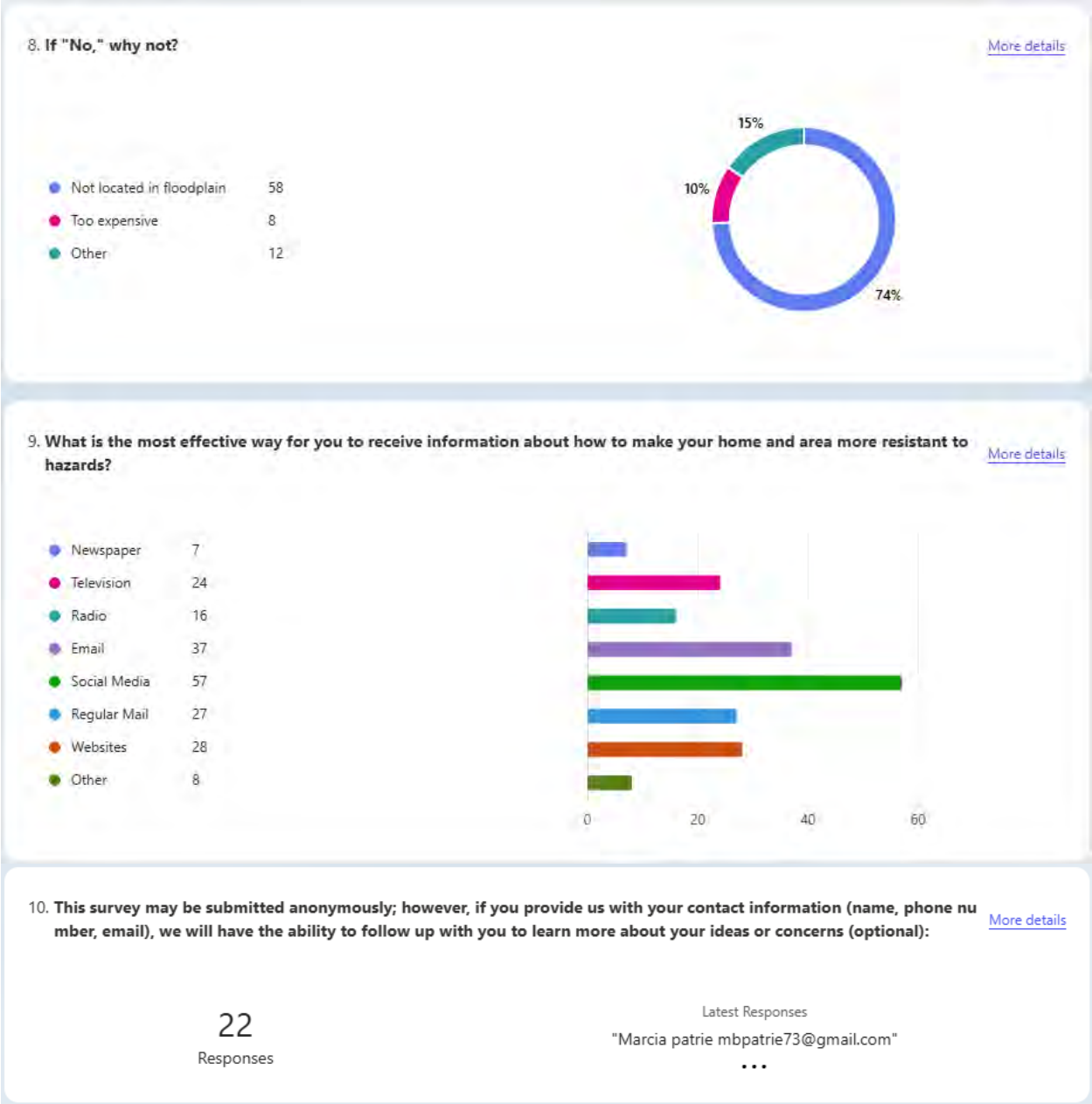


7. Do you have flood insurance?

[More details](#)

- Yes 8
- No 81
- I don't know 1





**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 | Flooding            |
| Cyber Attacks            | Hazardous Materials |
| Disruption of Services   | Loss of Life        |
| Drought                  | Preparedness        |
| Fire                     | 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      | Personal Preparedness       |
| Don't Allow CO2 Pipeline | Regulation (tighter)        |
| Fire Restrictions        | 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).**

