

Hazard Mitigation: Preparing for the Unknown



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There is a saying in South Dakota, “If you don’t like the weather, wait around a few minutes and it will change.” Weather patterns can change abruptly as they cross the northern plains, and temperatures can vary drastically from dangerously high to dangerously low. On January 22, 1943, Spearfish, South Dakota, reported a 49-degree swing in temperature in just two minutes when the temperature changed from minus 4 to positive 45 degrees, setting a world record (SDPB, 2021). More recently, Yankton, South Dakota, experienced a heat burst on September 21, 2024, when the temperature at 6:00 a.m. rose from 70 to 90 degrees in a matter of ten minutes (Yankton Press & Dakotan, 2024).

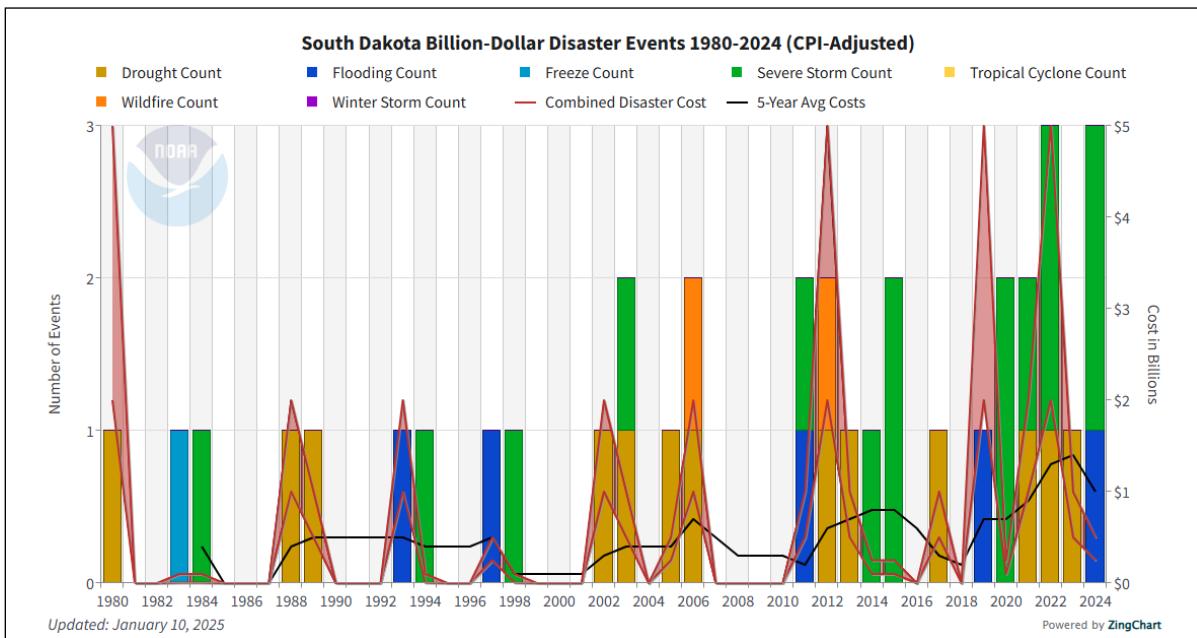


Figure 1: South Dakota has many different hazards to consider, as shown in this chart demonstrating how many billion-dollar disaster events occurred between 1980-2024 (Source: NCEI, 2025).

Beyond extreme temperature changes, each season also brings new natural disaster threats: blizzards, ice storms, wildfires, drought, floods, tornadoes, or severe storms with hail and high winds. These disasters, as shown in **Figure 1**, can result in high dollar damage costs. South Dakotans, known for their resiliency, have a long history of banding together as a community or region after one of these storms to help their neighbors. However, what

if the damage to structures, the economy, and human life could be minimized or prevented? That is where hazard mitigation and the assistance of the local economic development district can help.

Planning and Development District III, based in Yankton, South Dakota, supports a 13,218-square-mile region encompassing 15 counties and three tribal governments across southcentral and southeastern South Dakota. For over 50 years, District III has been a trusted partner, delivering essential services and resources to 60 cities and a rural population of more than 100,600 residents.

The Goal: Preparing A Plan

Every five years, county governments in South Dakota create or update their hazard mitigation plans, made possible through the Pre-Disaster Mitigation (PDM) grant program, which utilizes federal funds allocated by the state. These are essentially FEMA funds that are facilitated by the local Office of Emergency Management (OEM). For many years, District III provided the technical assistance necessary to develop a robust Hazard Mitigation Plan (HMP) for each county, including facilitating input meetings, conducting surveys, and undertaking research. The goal is to take all of that information and combine it into one complete plan that can serve as a guide for the county's emergency manager and leadership.

While background research on the area and history of disasters creates a strong base for the plan, the information gathered from citizens is crucial. The input meetings and surveys gain perspective from the residents in the county on what they feel are the biggest disaster threats and what potential projects they feel need to be priorities in the coming years. These projects often include installing generators, building emergency shelters, establishing zoning ordinances, burying power lines, or other activities that can either prevent hazards or assist post-disaster recovery efforts. In-person gatherings often gather the best information and allow for feedback and discussion about possible projects. The list of potential projects must be accurate and robust, as only projects on this list can be considered for grant funding.

The Challenge: Getting People Engaged

Many counties struggle with involvement and getting all municipalities and stakeholders fully invested in the process. Some offer incentives like free food during the meeting, but that is not a viable option for some due to cost. FEMA has also encouraged further public input through surveys that are made available online and in paper form. District III facilities and organizes the in-person meetings and the creation of the surveys.

Even though disasters are possible, many individuals like to think that they will not happen to them or in their community. This mindset could be the reason for the complacency of some citizens. Some communities may not attend or voice their opinions during a meeting, and getting a high response rate for the surveys is a challenge as well. Calls and emails before meetings and public notices can help, but attendance and participation are an ongoing battle.

Although it can be a challenge to get all the necessary stakeholders in the same room, the discussion that can happen when it all comes together is worth the effort. Public and stakeholder input is so important to this process, as these types of meetings often bring up challenges or issues that charts, graphs, and statistics cannot always provide.

These in-person discussions can reveal concerns and issues that are not known to those outside the county. For example, discussions in one county brought concerns about interstate closures during winter storms that cause problems in their communities. Those stranded because of the interstate closure and those who get stuck trying to drive alternate routes often become a responsibility of county and city officials. Residents raised concerns about how they need to house, feed, or rescue these individuals during storms. This means that during a winter storm, the county needs to consider the needs of not just those living in its jurisdiction but also those traveling through it.

The Work: Gathering Information and Setting Priorities

While the public meetings and surveys are being conducted, District III gathers data, mapping, statistics, and other information that can help show areas or conditions that should be addressed in the mitigation plan. These maps, like the drought map shown on the next page in **Figure 2**, are then shared with the counties and communities to determine their accuracy and impact. During meetings, maps have revealed areas that could be prone to flooding or wildfires. This can spark conversation about past issues in certain areas and a discussion about what could or should be done to prevent further issues.

Statistics about different demographics and geographies in each county are important to include in the plan as well. This information identifies possible vulnerabilities to certain disasters or individuals who would need more assistance during recovery or warning efforts. This can guide decisions on where generators, warning signals, or emergency shelters should be located.

Looking at historical weather and disaster events in the county and region is also important for the HMP process. By looking at how past disasters impacted the homes, businesses, and transportation, leaders can better prepare for future disasters and learn from what

went well and what could have been handled better. All of this information is included in the mitigation plan and used to identify potential projects over the next five years.

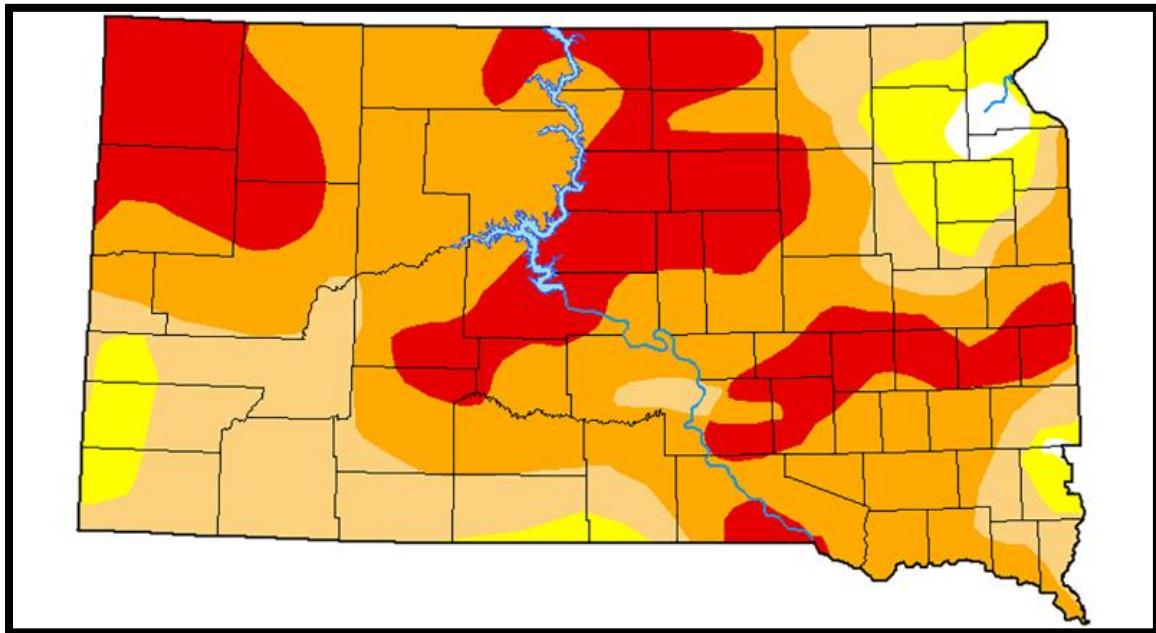


Figure 2: Maps like this drought map of South Dakota can show where the biggest hazards or possibility of natural disasters may occur.

The Reward: Safer Communities and Stronger Local Economies

Over the past 50 years, the District III region has experienced many significant and some deadly disasters. From the massive flooding of the Missouri River to a tornado nearly taking out an entire small town, or blizzards that left people without power for days. By planning and looking to fund and execute projects that can lessen the negative effects of these events, District III and the counties it serves can not only deter economic losses but also loss of life.

The natural resources and open spaces in South Dakota are also a large part of the state's economy. Agriculture, tourism, outdoor activities, and small businesses are crucial in the rural District III region. When a natural disaster hits and creates damage or loss in a community, it not only impacts the lives of the residents but also the local economy. The cost to repair and replace buildings, the loss of income while a business is shut down, and the destruction of utilities can be devastating. The mitigation plan serves as a way to minimize these effects by putting preventative and cautionary measures in place.

With all of this in mind, county leadership needs to recognize that their hazard mitigation plan is more than just a binder on a shelf. It is a guide that helps them make better

decisions for their safety and well-being. By being proactive instead of reactive, counties have an opportunity to protect their people and their livelihoods.

Lessons Learned

Emergency management work can seem daunting at times and somewhat overwhelming. However, when tragedy strikes, those who have solid plans and mitigation strategies in place have the greatest likelihood of recovery and resilience after the storm. However, it was very evident in these meetings that counties and communities need to be engaged long before any emergency happens.

Each municipality has its own struggles and obstacles to overcome when it comes to getting feedback and planning meeting attendance. Working with emergency management staff early in the process on how they will help engage and involve as many individuals and organizations as possible is key. By addressing this before the meetings start, the county can set expectations and create interest long before the first meeting invite is sent out. This will take additional effort from those in charge of the plan, but it is key to creating a solid and thorough final product.

REFERENCES

NCEI Monitoring Info. (2025). *Billion-dollar weather and climate disasters*. Billion-Dollar Weather and Climate Disasters | National Centers for Environmental Information (NCEI). <https://www.ncei.noaa.gov/access/billions/state-summary/SD>

South Dakota Public Broadcasting (SDPB). (2021, January 4). Spearfish's World Record Temperature Change - 1943. <https://www.sdpb.org/images-of-the-past/2021-01-04/spearfishs-world-record-temperature-change-1943>

Yankton Press & Dakotan. (2024, September 24). *It Was A Hot Time (Briefly) For The Yankton Area Saturday Morning*.

https://www.yankton.net/community/article_335260c4-7a1c-11ef-9f04-8389956fbac0.html