



June 2, 2023

The Honorable Joseph R. Biden, Jr.
President of the United States
The White House
1600 Pennsylvania Avenue NW
Washington, D.C. 20500

Through: Nancy Dragani, Regional Administrator
Federal Emergency Management Agency
Region VIII
Denver Federal Center
Building 710, Box 25267
Denver, CO 80225-0267

RE: REQUEST FOR A PRESIDENTIAL MAJOR DISASTER DECLARATION

Dear Mr. President,

The State of North Dakota continues to work collaboratively to address disaster events as they impact our great state. Within the past five years, North Dakota has received eight federally declared disaster declarations with our most recent being the November 2022 ice storm. The state had a particularly challenging winter, falling within 0.4 inches of the record average statewide snowfall and breaking snowfall records in the central portions of the state. The western and eastern regions also experienced significant amounts of snow and precipitation resulting in widespread flooding across the state.

Pursuant to Section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§5121-5207 (Stafford Act), and implemented by 44 CFR §206.36, the State of North Dakota requests a major disaster declaration for the April 10, 2023, to May 6, 2023, flood event that impacted the counties of Barnes, Burke, Dickey, Dunn, Golden Valley, Grand Forks, Hettinger, LaMoure, McHenry, Mercer, Morton, Mountrail, Nelson, Pembina, Ransom, Richland, Sargent, Steele, Towner, Walsh and Wells. The aforementioned counties have submitted approximately \$4.1 million in damages, with the Federal Emergency Management Agency (FEMA) validating \$2.48 million based on submitted documentation. Total damage estimates that were reported by impacted jurisdictions exceeded \$5 million, however, there were several counties that experienced flood impacts but were not able to exceed their per capita damage threshold to be included in this request thus far.

This winter brought continuous adversity endured by the citizens of North Dakota. Regions along the eastern portion of the state, especially those along the Red River corridor, experienced the greatest impacts caused by overland flooding. Federal, state, tribal and local jurisdictions and

agencies worked tirelessly to fight rising water levels with short- and long-term mitigation projects. Human life, property and economic stability remained at the forefront of our priorities as we worked together to keep citizens safe.

Weather Summary

North Dakotans experience a wide variation in climatic conditions. Winter commonly brings extreme cold and precipitation that creates predictable and unpredictable outcomes. The winter of 2022-2023 was no exception to this norm. This winter was ranked among the most extreme in nearly 150 years according to the Accumulated Winter Storm Severity Index (AWSSI). Many communities experienced record-breaking or near record-breaking snow amounts, with Dickinson breaking its all-time record. In addition, Bismarck and Grand Forks had their second snowiest, Jamestown third snowiest, and Fargo with its 12th snowiest winter. The deep snowpack covered the entire state leaving citizens overwhelmed.

The winter season was jumpstarted by an early November storm that dumped a foot of snow in many areas. Temperatures stayed well below normal through early winter, resulting in piled up snow with little relief between storms. Snow piled under bridges and along roadways and created obstructions to visibility throughout the plains. Snow depths later into the winter season were among the most ever reported. At the start of April, Fargo and Grand Forks had their greatest snow depth while Bismarck had its second greatest snow depth, according to the National Weather Service (NWS).

Copious amounts of snow enveloped the state creating challenges for communities before the melt. North Dakota's snowfall ran above what is considered normal during our winter season, which, according to the National Oceanic and Atmospheric Administration (NOAA), is around 50.5" on average. The 2022-2023 snow season ranked second at 101.2" compared to 101.6" in 1996-1997, doubling what we typically experience. "It is important to note that in 58 locations in North Dakota, seasonal snowfall records were broken, including places such as Dickinson and Napoleon where climate data has been collected since 1893," said State Climatologist Adnan Akyüz. Snowpack with heavy water content, combined with additional falling precipitation, exacerbated the conditions on frozen soil. The attention-grabbing snow depths catalyzed public concern as spring crept closer.

The snowmelt was slow to get started, with well below normal temperatures across the entire state as the first week of April began. As the second week of April approached, the western portion of the state experienced rapid warming. For example, the high temperature in Bismarck increased from 36 degrees on April 8 to 53 degrees the next day. These temperatures resulted in rapid snowmelt, significant runoff and ice jams contributing to riverine and overland flooding. Flooding conditions prompted road closures due to water being on roadways.

While water was flowing in the west, the eastern portion of the state experienced a gradual onset of spring. This allowed time for soil to become saturated and for water to start pooling in the east. The longer melting period was beneficial with a gradual melt. However, this slow melt led

to more slowly receding water levels. The Red River and surrounding tributaries maintained flood levels for a longer period of time than the west. Ultimately, North Dakota's historical snowfall amounts, reaching 0.4 inches away from record-breaking statewide average accumulations, drove the momentum into spring flooding. This led to challenging response efforts across agencies and communities.

Incident Analysis

Measures to protect citizens were implemented before, during and after the incident period. Preoperative protective measures were initiated by leadership within legislation. On April 4 a bill was signed that granted emergency aid to cover extraordinary snow removal costs for local governments. This highlighted the importance and necessity of snow removal in preparation for the impending threat of flooding. This bill provided aid to eligible tribal governments, counties, cities and townships responding to record-setting snow amounts with exhausted resources, pushing citizens' resiliency. Once the snow began to melt on April 10, 2023, we issued a statewide executive order opening additional emergency funding due to the projected flood levels. These actions are examples of the preemptive, protective measures taken by state government prior to flood response. Funds such as these provided temporary support before major flooding materialized.

Local groups also took early actions with imminent flooding in view. Dickey County Emergency Management in conjunction with the County Commission issued a Pre-Emergency Flood Declaration to remove the massive amounts of snow from critical flood control areas. Similar to other areas across the state, Dickey County received record-breaking snowfall over the winter. Flood control ditches stood under more than 10 feet of snow. This amount of snowpack all but guaranteed flooding. These critical flood control outlets, if not opened, would push overland floodwaters directly into residential and commercial areas, which would have caused extensive community damage. With available personnel, the snowpack was immediately removed from these diversion systems before the melt started, and discharge culverts were opened to keep the overland floodwaters out of these towns as much as possible. This is just one example of local community experts taking action against an imminent threat.

With the quick shift from winter to spring, the melt was disjointed across the state. Back-and-forth thunderstorms and snowstorms took place from April 10 to May 6, creating a safety concern due to the starting and stopping of water flows. Ground soil was extremely dry due to ongoing drought conditions that allowed water to infiltrate. Although the majority of the state had persistent, dry soil to absorb water during the thaw, the amount of water content within the state still left communities with considerable impacts to critical lifelines. Some snowpack was able to soak into the ground but soon saturated the soil, creating runoff and overland flooding. The risks associated with large amounts of snowpack and rain on top of frozen to partially frozen ground was prevalent across the eastern portion of the state.

Ice jams were a significant concern as they are not predictable or preventable. Ice jams pose a hazard to those upstream and downstream, and formed in multiple areas around the state on large and small river systems. Ice jams were reported in several counties including Dunn, Mercer, Morton, Mountrail, Pembina and Walsh. Additional counties were continuously monitoring ice as there was a vast threat potential at the confluence of waterways. These jams caused debris buildup, plugged culverts and increased water levels. Jams such as these acted as dams, and as

these jams broke up, the fast-moving water and ice ripped mature trees, agricultural products and other vegetation from shorelines. With the safety of operators in mind, actionable resources were limited when dealing with ice jams. Where there were safe conditions along the river, backhoes were utilized in several counties to break up ice that had begun building pressure along bridges to prevent damage or collapses.

In the City of White Earth (Mountrail County), significant overland flooding occurred due to ice jams upstream forcing water into the town within a matter of days. The community is surrounded by a dike to protect residents from Paulson Creek and the White Earth River, but responders were unable to get the gates closed in time for protection due to the fast-acting nature of the forceful water. In a rural town with a population of 80, seven homes were inundated with water, and four families self-evacuated. The water that rushed into town posed problems for water treatment facilities, leading to a boil order being issued to protect residents from potentially contaminated water. The public works department had utilized two pumps to move water but required additional assistance. Local resources such as gravel and hay bales were utilized to attempt to slow the water. The water flow was so impactful that local electric cooperatives were giving residents the option to cut power from their homes to prevent additional damage. To evaluate the severity of the ice jams, the North Dakota Civil Air Patrol (NDCAP) was deployed to obtain imagery and map immediate concerns. Small communities have limited resources, and as the clock ticked down, the decision was made to request the National Guard. A Black Hawk helicopter was deployed to place one-ton sandbags to block water and slow erosion. Following the National Guard response, pumps were placed over dikes to move substantial amounts of water. White Earth is one of many examples of the toll that communities faced to protect lives and critical infrastructure around the state.

Ice caused its own destruction, but liquid water took hold of the landscape producing dangerous overland flooding. Roadways were the most affected by the fluctuation in waterflow. Culverts that were unable to be cleared were plugged with ice and debris constraining water movement. As surface temperatures continued to warm, the ponding water around roads made its way through frozen culverts into rivers. On and off, the settling and moving of water caused severe erosion to crucial county and township roads. Inundated, eroded or collapsed roads called for an extensive amount of road and bridge closures across the state. Living in a rural state with limited transportation routes, many residents felt the impact of road closures. The settling of water ruined the foundation of paved and unpaved roadways impacting citizens' day-to-day activities. Mud-bogged surfaces posed challenges to accessing critical resources.

Road accessibility was also limited, which caused a shift in economic flow. One of the most severe cases of road devastation was in Dunn County. Comparable to many others experiencing blocked culverts, local road crews worked tirelessly to manually shovel out debris. Limited personnel worked on numerous roads and bridges to mitigate impacts. That mitigation proved effective, but not all infrastructure was left unscathed. Dunn County had an entire portion of a road collapse, destroying the two 8-foot-wide culverts below. It is currently estimated to cost \$115,589 to replace these culverts and repair the roadway back to its pre-disaster condition. This damage to a 40-foot-wide gravel road that is heavily trafficked by oil field workers and distributors slowed oil production. Workers will need to commute through rural residential areas on roads that may be unable to support the weight of semis and tankers. Roads nearby weren't built for oil field traffic with posted weight restrictions. Soft roads and shoulders create risks for residents who also need to use these roads for daily commutes. Currently, temporary solutions

are in place as there is an approximate one-and-a-half-year wait on new box culverts due to supply delays. Robust roadways cracking and collapsing shows the severity of damage that water can generate.

As water filled drains, ditches and culverts, it made its way into residential homes. Those who live in low-lying areas became vulnerable to the invading flood waters. Some residents experienced major issues with interior drainage as water came through storm and sewer drains into homes. Farmsteads saw water washing out their fields while having to move herds of livestock and machinery. Multiple types of resources were needed in response to those affected. As an example, water runoff from Gasman Coulee in Ward County came out of the normal drainage channel flooding a housing development. With no natural drainage to the area, Ward County Emergency Management rented a diesel pump to remove the water from the affected area. Pumps of all sizes were utilized and effectively moved water but were limited.

Sandbagging operations were crucial in helping residents protect themselves and their homes. Water persistently made its way into the cracks of people's homes, flooding basements and living spaces which caused losses in accessibility. Loads of sand were delivered where needed across the state. Hundreds of thousands of sandbags were filled by volunteers and community members. Locally, there were locations with available pre-filled sandbags, or a designated area where people could come fill sandbags as needed. Pre-positioned sandbag machines from the state were distributed where necessary to alleviate some of the load of physical filling. Protecting homes with sandbags is time-consuming and laborious. An average sandbag weighs 40 pounds, which poses challenges to those who are unable to lift and haul them for their own protection. Emergency sandbag deliveries were made for those who were isolated by water or had no way of getting assistance. Community members came together and worked endlessly to move and fill these sandbags around homes.

Whole Community and Government Partnerships

As a state that frequently experiences flooding, community members of North Dakota continue to show strength, resiliency and courage when faced with adversity. Coordination and collaboration are continuously prevalent, especially from a whole community approach. Proficient partners worked diligently to protect the state before, during and after an incident. Protective measures are implemented at all levels with a focus on life safety, the environment/property and critical infrastructure. The North Dakota Department of Emergency Services – Homeland Security Division (NDDDES-HLS) activated the State Emergency Operations Center (SEOC) and moved operations up to a Level 2 activation, involving key agencies within the Unified Command Structure (UCS). The state effectively came together to enable a unified approach as a whole-of government disaster response.

At the local level, emergency managers served as a major link to understanding impacts. Many counties in the state are rural with limited resources including materials or personnel. Our local and tribal North Dakota emergency managers are known to “wear many hats.” Because of this, closing roads became some emergency managers’ additional job along with monitoring and reporting, with limited closure signage or assistance. They additionally provided updated information on current conditions which gave situational awareness to community members and stakeholders through multiple formats, including social media alerts and posts. Cass County, our largest county, opened its Tactical Operations Center in an effort to respond to emergency call situations and assist those in need. Emergency managers held consistent meetings to plan,

discuss outlooks, develop preparedness measures and identify response action items to ensure consistent communication of efforts. As they are at the forefront of operations, staying connected at the local level kept everyone informed up the chain of command.

Stakeholders at all levels took action before the incident unfolded such as: closing stormwater gates, clearing culverts, gathering resource lists internally and externally, monitoring forecasts and pre-staging resources. Filling sandbags before flood action stage levels was crucial to a timely response around the state. Sandbag inventories were checked and information on preparedness measures was disseminated to cities and fire departments and through social media outlets. Local volunteers filled thousands of sandbags. In Cass County alone, they filled over 200,000 sandbags with assistance from 1,535 volunteers clocking just under 3,000 hours. County highway departments staged barricades and road closure signs at roads that were known to flood, while clearing ditches in preparation for runoff. The North Dakota Oil and Gas Division coordinated with facilities regarding shutting off wells in preparation for flooding. Oil and gas field inspectors followed up to verify the status of wells, shutting all wells that had flooded in the past as a contingency. The North Dakota Parks and Recreation Department diligently staged resources within state parks for easier access and frequently monitored impacts to waterways and dams within the parks. The City of Grand Forks partnered with the University of North Dakota's (UND) aviation department for flight operations. NDCAP provided aerial and ground reconnaissance of snowpack and river conditions prior to the melt. Imagery assets were essential in identifying areas of concern while keeping personnel out of harm's way.

NDCAP integrated critical state and local officials as aircrew members, within the guidelines of Federal Aviation Regulations (FARS) and the Community Air Passenger Reporting System (CAPRS), providing them an aerial platform for expert analysis and coordination. Their missions for aerial and ground reconnaissance provided information and intelligence on damage assessments, high water-mark reporting, flood protection measures, transportation networks, ice jam assessments and patrol, thermal imagery, air and ground transportation of critical flood response assets, and other key infrastructure or areas susceptible to flood damage. The North Dakota Department of Water Resources (NDDWR) and North Dakota Highway Patrol (NDHP) flew drones and planes to help get pictures and footage of rivers, potential dams of concern, erosion, ice jams and waterway debris. Drone surveillance was additionally utilized and provided by local sheriff's offices and fire departments.

Furthermore, NDDWR provided technical assistance by monitoring hydrology, impacted dams and their spillways, and staffing personnel in the SEOC as the lead state response agency. NDDWR's Dam Safety Section conducted 18 site visits to the dams in the Red River Watershed to ensure they were functioning properly. They also installed their Pushing Remote Sensors (PRESENS) units to check water elevations at least two times a day. The North Dakota Department of Environmental Quality (NDDEQ) monitored impacts to sewage and water intakes, issued boil orders and provided flood information packets for locals who may want them. The North Dakota Department of Agriculture (NDDA) monitored potential livestock and agricultural impacts during the beginning of bird migration with the risk of avian influenza emerging around widespread standing water.

With the ferocity of winter causing impacts on roads and travel safety, the North Dakota Department of Transportation (NDDOT) monitored impacts to the state and federal transportation network. Three mobile camera trailers were deployed by NDDOT to provide 24/7

live camera feeds for areas of concern. NDHP provided additional law enforcement support to local jurisdictions. State Radio dispatched and monitored fluctuations of resources. NDDDES-HLS led inter-agency situational awareness coordination and Joint Information System (JIS) coordination and messaging. State resources were provided upon request such as Tiger Dam and trailers, sandbagging machines, sandbags and pumps that were distributed to local, tribal and state agencies. A Joint Information Center (JIC) was opened, and the JIC monitored social media posts to prevent the spread of misinformation. Sharing best safety practices during flooding spanned across the state through multiple communication channels/platforms.

The North Dakota National Guard (NDNG) placed one-ton sandbags over dike gates on White Earth River to stop water from coming into the town and prevent destruction. The National Guard was conducting a flood response exercise the day that the Black Hawk was requested and was instead deployed to White Earth, putting their training into real-world operations. The North Dakota Department of Health and Human Services (NDHHS) coordinated with health and medical facilities, long-term care and Voluntary Organizations Active in Disasters (VOADS). NDHHS and local emergency managers collaborated with the American Red Cross and the Salvation Army to distribute flood information packets with informational recovery resources. VOADS worked in communities to provide cleanup kits to residents who experienced impacts and vulnerable populations.

The National Weather Service (NWS) followed environmental conditions closely and relayed information weekly to diverse partners. They additionally provided a liaison to the SEOC for immediate technical assistance on the fluctuating winter and summer storms in alignment with flooding. Lastly, we issued a state flood declaration on April 10 and issued a request for assistance from the U.S. Army Corps of Engineers (USACE) for the City of Harwood. The main concern for emergency assistance was technical expertise on resource needs and building up the levee system. USACE helped manage controlled releases and storage as prescribed in Water Control Manuals at dams around the state that were swelling with water, lessening the overall impact of output flows.

Long-Term Implications of Recent Disasters

Communities continue to experience extreme weather variability in all seasons. North Dakota has had 43 presidentially declared disasters since 1993, with 12 of these occurring within the last decade. Infrastructure across the state has experienced continuous wear due to extreme climatic conditions. The electrical infrastructure system had been laden with heavy ice events that led to federal aid in November 2022. Additionally, last spring from April 22, 2022, to May 25, 2022, North Dakota experienced a significant winter storm with subsequent flooding that cost nearly \$97 million in damages. That spring flooding event ranked as the fifth-largest disaster in North Dakota since 1997.

Aging infrastructure continues to challenge stakeholders across the state. Supply chain instability also has challenged many sectors. Recently, it has been highlighted that electrical infrastructure is weakened due to delayed delivery times. These circumstances have forced professionals to adapt and even reconstruct systems using what is available. These conditions continue to challenge all sectors day-to-day but are spotlighted during disaster events. Unceasing adverse weather conditions create more frequent damage to an already weakened system. The economic

and structural impacts of these dilemmas will remain far into the future. Vulnerability skyrockets when forced to operate on both an aging and weakened system. Adversarial and technological threats are increasingly on planners' radar as dependences on technology and electronics grow. The State Hazard Mitigation Planning Team has deemed cyberattack, followed by floods, as the state's greatest threat with little change anticipated. Professionals work to combat vulnerability alongside increased risk with careful planning and identification of valuable mitigation efforts.

The transportation sector has experienced similar impacts. Roads that were in the midst of repair from last spring's damage and routine winter wear are continuously under construction. These consecutive construction efforts are slowed because of repetitive losses and extensive timelines, therefore raising costs and labor times. Resources that have been utilized for response will need to be replaced, creating a continuous cycle with a challenging catch-up period.

Commitment to Resilience

The NDDES operates a progressive and involved mitigation program. The state maintains an Enhanced Mitigation Mission Area Operations Plan approved on Feb. 6, 2019, being the third state in the nation to uphold Program Administration by State (PAS) for both hazard mitigation grant management and plan review. The plan emphasizes over 80 local, tribal and state jurisdictions and private organizations incorporating a whole community approach. Holding this enhanced status allows planning teams throughout the state to have a direct impact on the projects that are funded and completed with close involvement with FEMA.

Close involvement in the planning process provides the team with a deep understanding of the threats and hazards that face North Dakota. This collaboration with emergency managers helps identify the most effective mitigation projects such as those that helped mitigate flooding impacts this spring. Many cities along the major tributaries such as the Red River have constructed flood walls, diversion projects and other projects to heal and harden the system to increase resiliency. Within the last two years, North Dakota has experienced great pressure and damage on the electrical infrastructure system. State agencies are working to combat the challenges the industry faces.

NDDES completed an electrical infrastructure resiliency plan identifying the vulnerabilities and identification of mitigation projects specifically relating to the electrical grid. This project highlighted the creative and proactive approach that the agency takes to completing mitigation projects. Additionally, the North Dakota Industrial Commission joined forces with three other states and two tribal nations in receiving the first Grid Resilience State and Tribal Formula Grant from the U.S. Department of Energy (DOE). The state was awarded \$7.5 million with a \$1.1 million state match that totals \$8.6 million to ensure the reliability of the power sector so that communities can have access to reliable, affordable and clean electricity. "Grid reliability has become vitally important as we become increasingly dependent on power supply. For North Dakotans, grid reliability is especially critical to survive harsh winter weather," states Claire Vigesaa, deputy director of the North Dakota Transmission Authority.

These efforts highlight the commitment to resilience by informing our actions through our storied history. The program has enacted 457 total mitigation projects since 1997 with a total of \$286,451,643.77 spent on completed mitigation efforts. Pew Charitable trusts found in 2020 that using complex budgeting mechanisms such as those used in North Dakota saves \$6.54 per \$1

invested. This savings puts the state in the highest category of savings in the country with a total of \$1,873,393,750.26 saved. These amounts represent the level of involvement that the mitigation program takes. Without these efforts this event could have been far worse than it was.

Conclusion

As you can see, the state of North Dakota cares deeply for its citizens as shown by actions taken to protect and improve lives during the most impactful events. Climatic extremes are tackled as a collective community. Close communication and collaboration connect all partners and citizens to provide the best response possible with available resources. Citizens continue to be resilient and face adversity in stride.

Pursuant to 44 CFR§206.36, we have determined that the spring flooding season of 2023 was of such severity and magnitude that a sufficient response and recovery were beyond the capabilities of state and local governments. As explained throughout this letter and supporting documentation, we respectfully request that you declare a major disaster with an incident period starting April 10, 2023, and ending May 6, 2023, for the counties of Barnes, Burke, Dickey, Dunn, Golden Valley, Grand Forks, Hettinger, LaMoure, McHenry, Mercer, Morton, Mountrail, Nelson, Pembina, Ransom, Richland, Sargent, Steele, Towner, Walsh and Wells.

As in previous disasters, we also request North Dakota be designated as a Public Assistance Managing State, and that the Hazard Mitigation Grant Program be implemented on a statewide basis.

I certify for this major disaster that the state and local governments will assume all applicable non-federal shares of costs required by the Stafford Act 93-288. Preliminary Damage Assessments (PDAs) indicate that damages are expected to exceed \$2.48 million as detailed in Enclosure B.

I have designated MG Alan S. Dohrmann and Homeland Security Director Darin Hanson as the State Coordinating Officers (SCOs) for this request. They will work with FEMA to coordinate damage assessments and may provide further information or justifications on my behalf.

As always, we end with gratitude. Thank you for your consideration of this request for a Major Presidential Disaster Declaration for the State of North Dakota. We appreciate your continued support as we recover from recurring disasters.

With gratitude,



Doug Burgum
Governor

Enclosures: Enclosure A: Request for Major Disaster Declaration Form
Enclosure B: 2023 Spring Flood PDA

Attachments: Attachment A: Jurisdictions Impacted by April 10 to May 6, 2023 Spring Flood
Attachment B: State Climatologist Analysis of 2022-23 Winter and Spring Flood Season
Attachment C: NWS April 10 – May 6, 2023 Weather and Water Summary
Attachment D: ND Presidential Declarations (1993 – 2022)

CC: Senator John Hoeven
Senator Kevin Cramer
Representative Kelly Armstrong
MG Alan S. Dohrmann, Director, North Dakota Department of Emergency Services
Darin Hanson, Director, North Dakota Division of Homeland Security
Justin Messner, Disaster Recovery Chief, North Dakota Division of Homeland Security