HAZARD MITIGATION PROGRESS REPORT 2024

NORTH Dakota
Be Legendary.™
Emergency Services

Table of Contents

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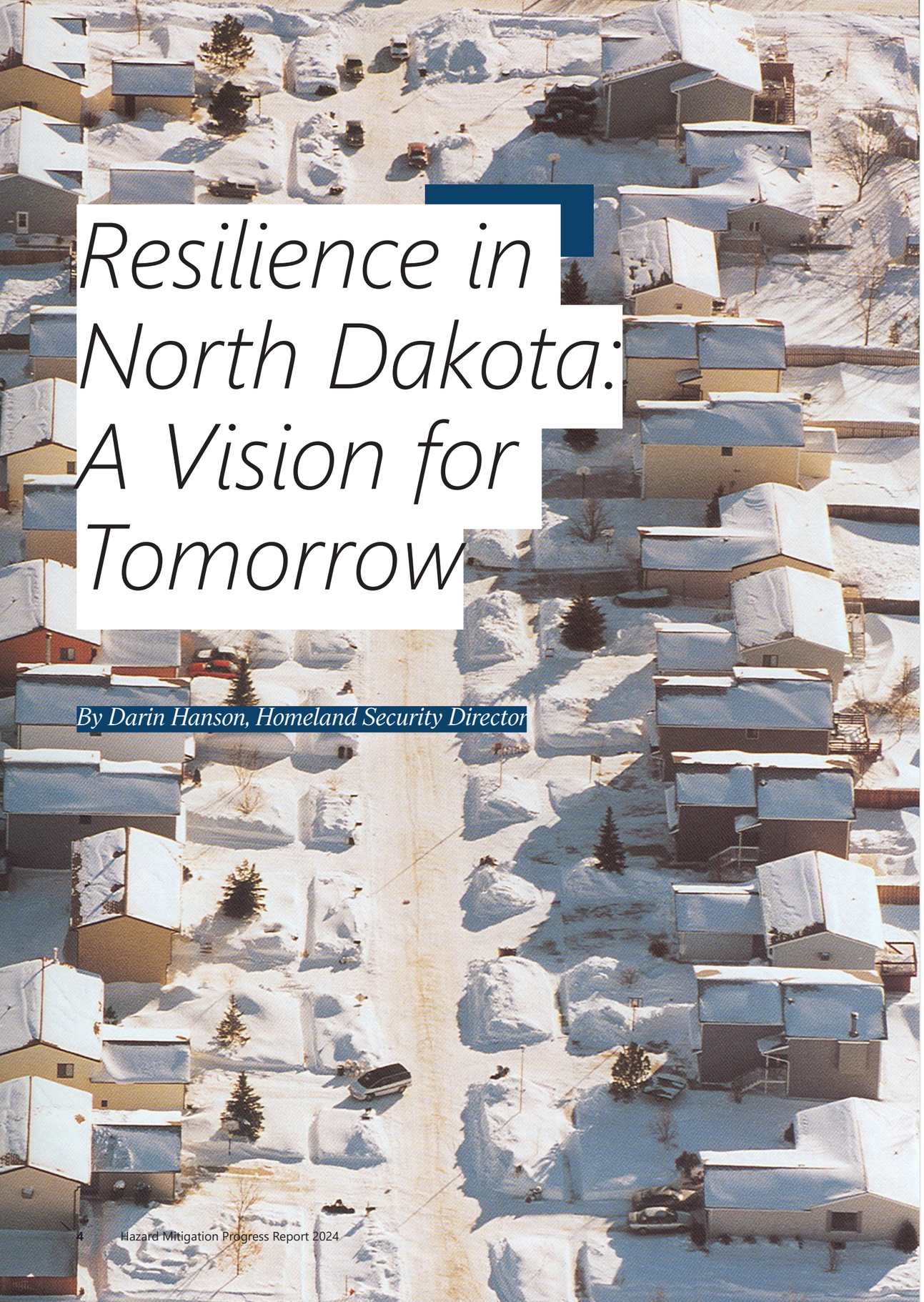

Resilience in North Dakota: A Vision for Tomorrow

By Darin Hanson, Homeland Security Director

The North Dakota Department of Emergency Services extends its deepest gratitude to the State Hazard Mitigation Team for positioning North Dakota as a national leader in disaster resilience.

North Dakota earns its reputation through the hard work of the State Hazard Mitigation Team representing more than 100 public and private organizations. Our partners empower others by sharing their expertise, funding sources, and ideas. They motivate other states to emulate their innovative approaches to mitigation as my staff describes their achievements at regional and national conferences.

Opposite: Photo from NDDES Archives; 1997 Wahpeton

The latest accomplishment, the development of the 2024-2029 Enhanced Mitigation Mission Area Operations Plan (Enhanced Mitigation MAOP), reflects the State Hazard Mitigation Team's sustained commitment to ensure a safer North Dakota for today and future generations. Together, the State Hazard Mitigation Team retained the Enhanced Mitigation MAOP's national status as an enhanced mitigation plan, surpassing rigorous federal requirements. We celebrate their successes as we advance the mitigation plan's robust strategy for reducing the impacts of hazards and threats on our state's residents.

An Investment with Strong Dividends

Emergency management represents a continuous cycle of preparedness, response, recovery, and mitigation, the latter of which is sustained action to reduce the impacts of disaster on life and property. We make mitigation a priority in North Dakota because it pays big dividends for what matters most to us, the safety of our fellow citizens. If we save just one life, it's well worth the effort.

Financially, it makes sense to invest in mitigation before our next disaster. We can clearly articulate how many citizens will benefit from the investment for every mitigation project. The numbers speak volumes about the benefits of our efforts. Consider these facts:

- A national study by the National Institute of Building Sciences found that each $1 spent on hazard mitigation resulted in an estimated $6 saved in recovery (National Institute of Building Science, 2018).

- North Dakota surpasses the national average with an estimated $6.54 saved for every $1 spent on mitigation (Pew Charitable Trusts, 2019).

- Enhanced mitigation plan status increased the state's share of mitigation dollars for federally declared disasters to 20 percent. Since North Dakota achieved enhanced status in 2019 and then again in 2024, North Dakota's share of Hazard Mitigation Grant Program (HMGP) dollars increased to an impressive $36.1 million for the nine federally declared disasters that occurred between 2019 and 2023.

Our long-time mitigation partner, the North Dakota Department of Water Resources (DWR), reports its investments in flood protection and conveyance projects since 2019 are expected to accrue $361 million in benefits over the 50-year life of each project.

Bottom line, North Dakota has prevented more than $1.9 billion in disaster damages and more than $24 billion in disaster recovery assistance since 1993 (NDDES, 2023). The accompanying chart, Losses Avoided from Hazard Mitigation Funding (see page 10-11), provides a more detailed illustration of benefits and losses avoided through the Hazard Mitigation Assistance programs.

Building a Program of National Stature

"The Enhanced Mitigation MAOP demonstrates the State's fierce commitment to advancing a whole-of-government approach to mitigation planning and investments. Community-wide input and engagement were clearly a priority in the planning process as evidenced by the range of interdisciplinary partners at the table, and the comprehensive data and feedback incorporated throughout the plan."

Logan Sand, Community Planning Section Chief
Ariana Borrello, FEMA's Community Planner

An exemplary hazard mitigation program requires a roadmap that articulates a viable strategy for mitigating impacts and vulnerabilities to natural and technological hazards and adversarial threats. Our roadmap, the Enhanced Mitigation MAOP, reflects the keen insights of our State Hazard Mitigation Team, earning high praise from Logan Sand, Community Planning Section Chief, FEMA Region VIII, who also serves on our SHMT Technical Advisory Committee, and Ariana Borrello, FEMA's Community Planner who led the review of the state plan.

A solid foundation also requires a team willing to provide technical assistance to local and tribal planning teams with project development and mitigation plans that surpass federal requirements. The SHMT supports NDDES as one of the few Program Administration by States (PAS) participants in the nation in which FEMA delegated both program management and local plan review and approval to the state. Our SHMT provides technical assistance on hazard analysis specific to their area of expertise, and supports NDDES with plan developers meetings to guide teams through federal regulations and funding sources, and Community Coffees designed to elicit feedback from the public who share ideas for protecting their communities. "FEMA Region 8 thanks the NDDES team for setting the mitigation bar high, and for continuing to provide wide-ranging support and resources for local and tribal mitigation planning efforts to implement the highest quality mitigation planning program," Logan and Ariana wrote.

The article, "North Dakota's Journey to Resilience: State's Ongoing Efforts in Hazard Mitigation," (found on page 52), takes a deeper dive into North Dakota's current mitigation initiatives. Solid mitigation plans lead to thoughtful analysis of projects to build resiliency in communities, so the next disaster is not as impactful as the catastrophic ones we have experienced in previous years.

Future Conditions

We are hoping to mitigate ourselves out of disasters, as practical as possible given we can't predict when a tornado or train derailment will occur. But we do know the trajectory of hazards we can predict, such as flooding. We know what areas are at risk as we target mitigation projects to reduce flood impacts. We may not know where a tornado will strike, but we do know that shelters save lives, hence our emphasis on shelters in at-risk areas, whether they are in our local and state parks or mobile home communities.

We've already seen the work we've done in the Red River valley in lessening the impacts of floods whereas in previous years it would've been an issue. The collaborative approach taken by the North Dakota Department of Water Resource, the United States Army Corps of Engineers, and the Metro Flood Diversion Authority highlights the proactive approach needed to further resilience.

We want to lead in mitigation because we know it saves money in the long run and lessens the suffering of our citizens.

- With gratitude,

Darin Hanson

Darin Hanson and daughter matching at the 2023 'Bring Your Kid to Work Day'. Source: Darin Hanson

Hazard Mitigation Grant Program

DR-4444 2019 Spring Flood

	Approved Cost	Benefits	Losses Avoided
Stanley Lift Station	$ 122,827.23	$ 406.609.00	$ 283,781.77
Kulm Water Tower Generator	$ 37,443.00	$ 331,401.00	$ 293,958.00
NDDES Critical Facility Generators	$ 1,301,322.15	$ 1,689,280.00	$ 387,957.85
Totals	$ 1,461,592.38	$ 2,020,681.00	$ 559,088.62

DR-4475 2019 Fall Flood

	Approved Cost	Benefits	Losses Avoided
Cass County Buyout	$ 570,900.00	$ 2,444,898.00	$ 1,873,998.00
Cavalier Co Mt Carmel Dam Storm Shelter	$ 187,635.00	$ 335,993.00	$ 148,358.00
Bismarck Lift Station Generator	$ 236,250.00	$ 285,190.00	$ 48,940.00
Elgin Storm Shelter	$ 111,671.52	$ 237,038.00	$ 125,366.48
LaMoure County Storm Shelter	$ 94,197.00	$ 407,327.00	$ 313,130.00
Steele Co Golden Lake Storm Shelter	$ 172,830.00	$ 605,634.00	$ 432,804.00
Tri County WD Generators	$ 277,322.50	$ 791,107.00	$ 513,784.50
McIntosh Co Generators	$ 106,612.01	$ 126,868.00	$ 20,255.99
Bismarck FD Generator	$ 152,775.00	$ 168,501.00	$ 15,726.00
Totals	$ 1,910,193.03	$ 5,402,556.00	$ 3,492,362.97

DR-4509 COVID-19

	Approved Cost	Benefits	Losses Avoided
West Fargo Acquisition/Demolition	$ 1,665,573.00	$ 7,345,053.00	$ 5,679,480.00
Bismarck Public Health Generator	$ 155,989.18	$ 246,018.00	$ 90,028.82
Grand Forks Vail Circle Storm Sewer Project	$ 8,610,637.50	$ 17,825,913.00	$ 9,215,275.50
Totals	$ 10,432,199.68	$ 25,416,984.00	$ 14,984,784.32

DR-4553 2020 Spring Flood

	Approved Cost	Benefits	Losses Avoided
Milnor Water Supply Generator	$ 115,500.00	$ 136,109.00	$ 20,609.00
Steele Co Road 5 Bridge	$ 671,000.00	$ 803,976.00	$ 132,976.00
City-County Health Generator - Barnes	$ 98,752.50	$ 123,552.00	$ 24,799.50
Totals	$ 885,252.50	$ 1,063,637.00	$ 178,384.50

DR-4565 2020 Summer Flood

	Approved Cost	Benefits	Losses Avoided
Nelson Co Stump Lake Storm Shelter	$ 95,329.00	$ 373,743.00	$ 278,414.00
Harvey Water Treatment Plant	$ 148,413.76	$ 467,510.00	$ 319,096.24
Silver Lake Recreation Area Storm Shelter	$ 241,605.00	$ 1,606,667.00	$ 1,365,062.00
	$ 485,347.76	$ 2,447,920.00	$ 1,962,572.24

DR-4613: 2021 Summer Flood

	Approved Cost	Benefits	Losses Avoided
Grand Forks Co Acquisition	$ 471,660.00	$ 1,368,943.00	$ 897,283.00
Totals	$ 471,660.00	$ 1,368,943.00	$ 897,283.00

DR-4660 2022 Winter Storm and Flood

	Approved Cost	Benefits	Losses Avoided
Minnkota Power Bank Stabilization	$ 927,650.00	$ 1,308,374.00	$ 380,724.00
Mountrail Co Residential Storm Shelter	$ 9,012.15	$ 14,280.00	$ 5,267.85
Boom Lake Flood Mitigation	$ 3,124,090.00	$ 4,729,472.00	$ 1,605,382.00
Fargo Residential Strom Shelter	$ 9,955.00	$ 11,398.00	$ 1,443.00
Totals	$ 4,070,707.15	$ 6,063,524.00	$ 1,992,816.85

Pre-Disaster Mitigation Program

2018

	Approved Cost	Benefits	Losses Avoided
Fargo Pump Station Flood Mitigation	$ 4,753,290.00	$ 10,991,469.00	$ 6,238,179.00
Burleigh County U of Mary Slope Stabilization PH II	$ 5,286,955.80	$ 20,279,189.00	$ 14,992,233.20
City of Mandan Emergency Generators	$ 309,843.25	$ 1,343,968.00	$ 1,034,124.75
City of Jamestown James River Bank Restoration	$ 911,809.44	$ 1,418,925.00	$ 507,115.56
Mckenzie County Storm Shelters	$ 115,765.63	$ 154,822.00	$ 39,056.37
Beulah Storm Shelters	$ 94,966.13	$ 187,496.00	$ 92,529.87
City of Fargo Wastewater Treatment Plant Flood Protection	$ 4,906,390.00	$ 8,000,127.00	$ 3,093,737.00
Totals	$ 16,379,020.25	$ 42,375,996.00	$ 25,996,975.75

2019

	Approved Cost	Benefits	Losses Avoided
Beulah Floodway Property Remediation Project	$ 86,185.60	$ 276,000.00	$ 189,814.40
Walsh County United Medical Center Generator	$ 916,414.00	$ 1,429,537.00	$ 513,123.00
Walsh County Admin Bldg. Emergency Generator	$ 47,969.35	$ 78,695.00	$ 30,725.65
Totals	$ 1,050,568.95	$ 5,744,730.00	$ 4,694,161.05

Building Resilient Infrastructure and Communities

2020

	Approved Cost	Benefits	Losses Avoided
No construction projects	--	--	--

2021

	Approved Cost	Benefits	Losses Avoided
No construction projects	--	--	--

NORTH DAKOTA RECEIVES APPROVAL FOR ITS ROADMAP TO RESILIENCE

By Alison Vetter & Kathleen Donahue

The North Dakota State Hazard Mitigation Team (SHMT) achieved a major milestone this winter for its work on our state's roadmap for resilience.

The Enhanced Mitigation Mission Area Operations Plan (Enhanced Mitigation MAOP) received consecutive enhanced status from the Federal Emergency Management Agency (FEMA) on February 5, 2024.

The Enhanced Mitigation MAOP

"Here in North Dakota, a lot of our disaster events, like floods, occur year after year. No one wants to keep reliving and paying for the same crisis year after year. This plan shows the thoughtfulness within the emergency management cycle--prepare, respond, recover, mitigate--to make us resilient for the future,"

Darin Hanson, NDDES Homeland Security Director

tells the story of hazards and threats across our state, with strategies to mitigate the impacts. The plan establishes the framework for how 100-plus partners who comprise the SHMT work collaboratively toward a safer North Dakota. The release of this plan comes on the heels of the extreme weather disasters that have wracked the United States this year, 11 of which exceeded $1 billion in recovery cost, tying for the second-most number of extreme weather disasters on record.

The saving grace for the frequency and intensity of disasters in North Dakota is the effectiveness of the mitigation program.

FEMA requires all states to have a Hazard Mitigation Plan in place in order to receive mitigation grant funding. North Dakota was the first state in the region to achieve

an enhanced status in 2018 and has kept the status intact since, allowing the state to receive an additional 5% federal funding. Funding goes to projects to mitigate the risks of future disaster events which could range from water diversion projects to burying electrical lines.

"Since we achieved enhanced status, North Dakota's share of Hazard Mitigation Grant Program dollars increased to an impressive $53.6 million for the five federally declared disasters that occurred between 2019 and 2021," Justin Messner, NDDES-HLS Disaster Recovery and Mitigation Chief, said.

The Enhanced Mitigation MAOP is truly a living document, as evidenced by the Mitigation Action Update section of this report. Our partners are actively engaged in mitigation projects, refining the scope of projects and updating progress on implementation.

Logan Sand, Community Planning Section Chief, FEMA Region VIII, who joined the SHMT Technical Advisory Committee this year, and Ariana Borrello, FEMA's Community Planner who led review of the state plan, provided invaluable guidance to meet stringent federal requirements for enhanced plan status. "The North Dakota Department of Emergency Services (NDDES) and the SHMT continue to highlight, coordinate, and execute crucial mitigation project implementation, as described in key annual progress reports on mitigation project implementation," Logan and Ariana wrote recently in an email to NDDES. "The State clearly understands the importance of including socially vulnerable and underserved communities' considerations in the changing landscape of natural hazard risk, which is being amplified and exacerbated by climate change and other future conditions. FEMA Region 8 thanks the NDDES team for setting the mitigation bar so high, and for continuing to provide wide-ranging support and resources for local and tribal mitigation planning efforts to implement the highest quality mitigation planning program."

The SHMT was instrumental in positioning NDDES as a Program Administration by State Pilot Project participant with authority to manage the hazard mitigation program and to approve local mitigation plans. "NDDES continues to execute hazard mitigation application review, grant management, mitigation planning and other responsibilities of the highest caliber, which is why they are one of the few Program Administration by States (PAS) in the nation," Logan and Ariana Borrello wrote. "The NDDES staff conduct gold standard hazard mitigation plan reviews, lead mitigation plan development workshops, and are always looking for creative ways to elevate the State's mitigation planning program. It is always an absolute pleasure to work with this team!"

The plan can be found at the NDDES website, des.nd.gov.

Environmental Resiliency in the Face of Extreme Climate Variability –*Is This Possible?*

By Gregory Gust, Meteorologist and Climate Lead
N.D. Department of Emergency Services

Can you name the five states with the hottest recorded temperatures? California, Arizona, Nevada, New Mexico, and … North Dakota? That's right, North Dakota is tied for fifth in states with the highest recorded temperature (121°F), even beating Texas. Plus, it's tied for sixth place in states with the lowest recorded temperature (-60°F) – with no other state having both a record hotter and a record colder temperature!

North Dakota has the most extreme day-to-day, week-to-week, season-to-season, and year-to-year variability in temperature and precipitation of any US State.

Most notable is the state's extreme day-to-day, week-to-week, season-to-season, and year-to year variability in both temperature and precipitation - the most extreme of any U.S. state! It's written in our ancient "glacial" past and throughout our more recent "historical" past. In recent decades, North Dakotans have faced repeated onslaughts of drought, wildfire, flood, extreme summer storms, and extreme winter storms with local, tribal, state, and federal level disaster declarations having become commonplace.

This volatile and extremely variable weather and climate of the Northern Great Plains (NGP) as a whole, and North Dakota in particular, is especially challenging for all sectors and peoples. And, as discussed extensively in the new 2024-2029 ND Enhanced Mitigation Mission Area Operations Plan, future climate conditions could exacerbate this extreme variability and these challenges.

What, if anything, can North Dakotans do to mitigate the effects of or adapt to any potential large scale environmental impacts from our state's already extreme climate variability?

Dr. C. Thomas Shay, Professor Emeritus of the Department of Anthropology, University of Manitoba, in his most recent publication, Under Prairie Skies, the Plants and Peoples of the Northern Plains (Shay, 2022), provides a fascinating study of the interplay of native plants and peoples from the region's post-glaciated landscape to today's grasslands, wetlands, and woodlands. Shay's illustrated guide to our uncultivated landscape gives us a glimpse of what a naturally resilient biome might look like. Our modern challenge is to also consider what a resilient but fenced, cultivated, irrigated, drained, industrialized, urbanized, or otherwise sculpted North Dakota landscape may look like.

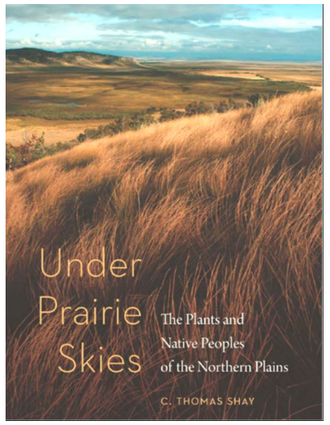

Figure 1. Under Prairie Skies. Source: Shay, 2022

For now, let's consider the state's grasslands, rangelands, wetlands, and just a few of the current climate resiliency issues they face.

Grassland Resiliency

The North Dakota Game and Fish Department classifies roughly 30 percent of the state as grassland or prairie, with an additional 1 percent as shrubland (NDGF, 2024). This landscape is typically dominated by a wide variety of cool-season grasses and forbs that are both nutritive and resilient to a highly variable climate (Toledo et al., 2014; 2023). However, Toledo (2023) argues that the recent protracted NGP wet-period from the 1990s through the 20-teens allowed Kentucky Bluegrass, a relatively shallow rooted and water intensive grass, to become a much more dominant and invasive grassland competitor. Most concerning is that current climate variability and future climate projections promote conditions where Kentucky Bluegrass infested pastures are generally less resilient, result in less biomass production, and produce lower quality feed under increasingly heat and/or water stressed conditions. See Figure 2., opposite.

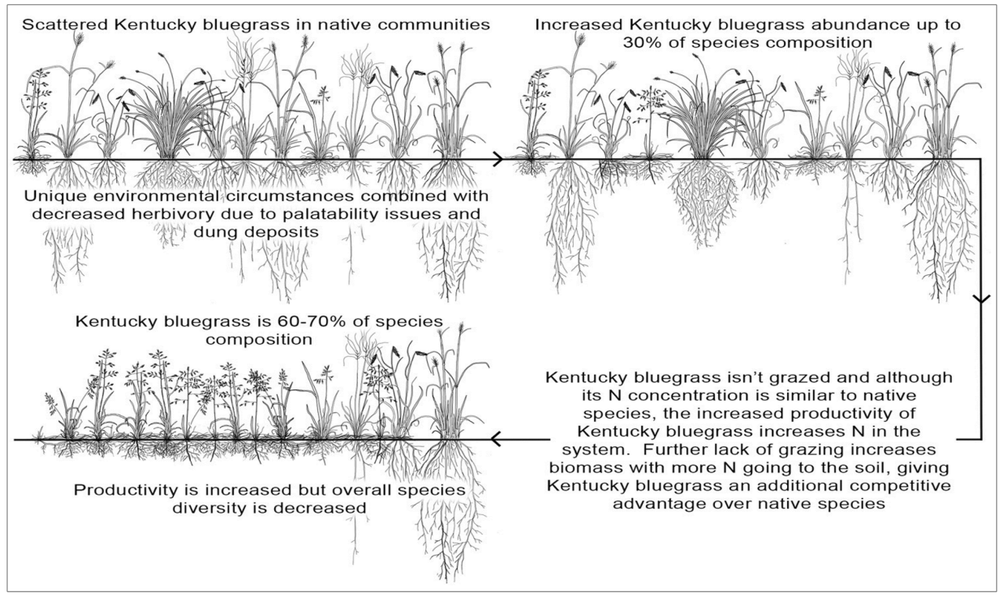

Figure 2. Relationship between Kentucky bluegrass spread and increasing soil nitrogen content.
Source: USDA/ARS; Toledo, 2014

During the summer of 2023, I had the opportunity to visit with Dr. David Toledo and some of his research colleagues and to take a tour of his grassland research plots located near the USDA Agricultural Research Station, southwest of Mandan, ND. And yes, that involved walking through various naturalized grassland plots, some of which had active grazing herds replete with fresh droppings.

During the tour, Dr. Toledo discussed how their research station was testing various climate and invasive species mitigation strategies, including both prescribed burns or pasture-controlled prairie fires, and intensive or "mob" grazing strategies. Toledo noted that these two methods were quite successful in controlling the spread

of Kentucky Bluegrass while promoting the regrowth of native, more deeply rooted, and more resilient grasses. He was quick to note that his research has repeatedly shown that mob-grazed pastures often took a year longer to recover than those which had been burned off. And even though it takes longer for recovery, ranchers seemed to prefer the mob-grazing over the controlled burn approach as more risk manageable.

Even though it takes longer for recovery, ranchers seem to prefer mob-grazing over controlled burn approach as more risk manageable.

Figure 3. Mob grazing herd at Mandan USDA-ARS. Source: Dr. David Toledo

In January of 2024, I was able to discuss this topic with Jerry Doan, a Burleigh County rancher, award winning environmental steward, N.D. Cowboy Hall of Fame and N.D. Agriculture Hall of Fame member. Doan was honored as the keynote speaker for the 41st Red River Basin Land and Water International Summit Conference held in West Fargo ND (Doan, 2024). Doan's main presentation focused on regenerative agriculture: demonstrating how these practices lead to improved soil and water resource health while mitigating the effects of climate change and perhaps even reversing them, holding promise for future generations of ranchers. He also provided his observations on the use of both mob-grazing and prescribed burns, confirming his preference for mob-grazing as opposed to the potentially devastating impacts of a planned fire gone awry.

Why is this important? Healthy and deep-rooted native grasslands have demonstrated the resiliency necessary for a highly variable and potentially more extreme climate future and will be most able to support a healthy and robust ranching eco-culture throughout this century and into the next. Something recognized and supported by both the regenerative rancher (Jerry Doan) and the grassland research scientist (David Toledo).

Ranchers and Researchers agree: deep-rooted native grasslands are the best bet for robust and resilient ranching eco-culture.

Figure 4. PhenoCam at the Northern Great Plains Laboratory Tower. Source: NEON

Wetland Resiliency

During the late spring of 2023, I had the opportunity to tour the USGS Northern Prairie Research Center, near Jamestown ND, and visit with USGS Research Ecologist, Dr. Owen McKenna. His research has focused on the hydrology and geochemistry of the Prairie Pothole region of the Northern Great Plains, which spans a large portion of North Dakota.

Figure 5. Scientists survey prairie potholes in Wells County, North Dakota. Source: Owen McKenna, USGS Northern Prairie Wildlife Research Center.

In addition to designing an improved Prairie Pothole hydrologic model (McKenna et al., 2017, 2018; Knapp et al., 2023), he has used this model to estimate future impacts of climate and land-use changes on the habitat of migratory waterfowl. Earlier hydrologic models had shown rather bleak prospects for wetland maintenance under steadily warming climates with potentially less reliable precipitation. As Dr. McKenna, explained, his higher resolution hydrologic modeling, when coupled with more recent and higher resolution climate modeling, helped he and his research colleagues to develop strategies to combat extremely variable and changing climate conditions, and to preserve wetlands and migratory bird breeding habitats during extreme drought conditions (McKenna et al., 2021; Mushet et al., 2022).

Figure 6. Piping plover sitting on a nest. Source: Dustin Toy, USGS.

A Piping Plover (Charadrius melodus) sitting on a nest. Piping Plovers breeding in the northern Great Plains, listed as Threatened since 1985, have been managed as a metapopulation consisting of four separate breeding groups with assumed infrequent movements among groups.

A fairly recent and recurrent problem in the state, Highly Pathogenic Avian Influenza (HPAI) can spread from certain migratory waterfowl to both domestic poultry flocks and dairy herds (NDDA, 2024). And Gilbert et al. (2008), suggests that expected warmer and either wetter or drier conditions will likely increase this risk. During a recent meeting of the ND Agricultural Disaster Response Group, led by the NDSU Agricultural Extension Service, State Veterinarian, Dr. Ethan Andress, provided an update on the latest HPAI conditions in the state (Meeting notes, 11 Jul 2024). Dr. Andress made a point of stating that existing wetlands in the state don't pose an appreciable threat of exposure to the disease. Instead, migratory waterfowl are much more likely to settle in farm fields and pastures along their migration path where they then increase the risk of contact with local flocks and herds.

According to the NDSU Ag Extension Service (2024) and the State Veterinarian's Office (NDDA, 2024) most in-state biosecurity measures encourage poultry and bird owners to keep their flocks and herds separated from any wild birds and their droppings, and to ensure that feed and water supplies are free of contamination.

Why is this important? Though wetlands comprise only about 5 percent of North Dakota's landscape (NDGF, 2024), they provide a critical ecological buffer by holding excess water during periods of heavy precipitation and flooding, even allowing for increased aquifer recharge, while retaining water to help support beneficial plant and animal life during times of drought (McKenna, 2018).

Figure 7. Northern Shovelers in flight in the Devils Lake area. Source: North Dakota

In summary, scientists and practitioners alike recognize the importance of an educated and integrated approach to developing real climate resiliency.

In the mitigation and adaptation examples cited above, there were North Dakota-based researchers, interfacing with North Dakota ranchers and farmers, and using

North Dakota-specific climate analytics plus the most recent downscaled climate change scenarios available to investigate and address real issues of local and regional resiliency - in the face of the state's extreme climate variability and potential climate change. Recent research not only supports this collaborative approach but emphatically demands that this must occur "if the goal is to address meaningful (rangeland adaptation) science" (Wilmer et al., 2024), rather than to simply produce academic or government reports.

Figure 8. Invasive annual brome grasses filling in trail. Source: Dr. Amy Symstad, Northern Prairie Research Center

Invasion by annual brome grasses (cheatgrass and Japanese brome) on a trail across native prairie into National Park Service units in the Northern Great Plains.

Wilmer's (2024), research article titled "Resilience is Not Enough", identifies certain essential Socio-Ecological Systems (SES) concepts, which include the very concepts of risk management and vulnerability analysis we often explore as part of state, local, and tribal hazard mitigation planning. Furthermore, the Stakeholder Teams and community outreach emergency managers develop and employ throughout the hazard mitigation planning process often resemble Wilmer's equivalent adaptation research teams… or they should.

In league with Wilmer (2024), I posit that in order to best address the challenges our future climate conditions may hold for North Dakotans, we must develop and employ the applied climate research skills of our many in-state and greater NGP focused research scientists and practitioners, and to integrate them into all of our Emergency Management planning processes. For now, let's consider the state's grasslands/rangelands and her wetlands, and just a few of the current climate resiliency issues they face.

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Buzzing into the Future:

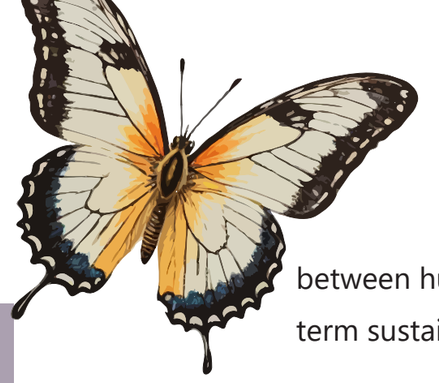
Enhancing Urban Resilience Through Nature-Based Mitigation Programs

By Katie Leitch and Carl Meyer

Nature-based mitigation is invaluable because it leverages the inherent capabilities of ecosystems to address environmental challenges. By preserving and restoring habitats such as forests, wetlands, and grasslands, we can significantly enhance biodiversity, support ecosystem services, and promote natural carbon sequestration. These ecosystems act as carbon sinks by absorbing CO2 from the atmosphere, thus playing a crucial role in mitigating climate change. Healthy ecosystems promote pollination, crucial for food production and natural pest control. Moreover, they provide essential services such as water filtration, flood control, and storm protection, which help in disaster risk reduction and improve overall environmental resilience. This not only supports wildlife but also benefits human communities by maintaining the natural balance required for sustainable living.

Purple Echinacea

Nature-based mitigation offers economic, social, and health benefits that engineered solutions often lack. Sustainable livelihoods can be supported through eco-tourism, sustainable agriculture, and fishing, which foster economic growth while maintaining ecological integrity and encouraging food sovereignty. Green spaces also contribute to mental and physical well-being, providing recreational opportunities and improving air quality. Involving local communities in these projects empowers them and strengthens their capacity to adapt to climate change impacts. The cultural and aesthetic value of natural landscapes enhances the quality of life and preserves cultural heritage. Nature-based solutions are not only cost-effective but also create a harmonious relationship



between humans and the environment, ensuring long-term sustainability and resilience.

North Dakota Game and Fish (NDGF) offers a free educational and hands-on opportunity for resiliency building through their Urban Pollinator Program (UPP). This program was created to assist educational organizations in developing and implementing pollinator gardens within elementary, middle, and high schools, special education schools, and educational clubs (ex. 4H). Each granted applicant receives a pollinator kit which includes a grade-appropriate lesson plan, a plant identification book, and information on the pollinators that depend on them. Educational materials on the native grasses, wildflowers, and weeds, with the addition of two grow trays of flowers for in the classroom (seed starting trays, flat trays, humidity domes, seeds, and soil) are also provided. Additionally, 100 plugs of wildflowers and grasses are delivered to the site of the garden, including a minimum of three grass species and six forb species all native to North Dakota. Applicants are required to have a minimum of 100 square feet for the garden and the schools will determine how the space is utilized and maintained. The requirement for the program is 1 year, but typically these gardens last much longer as participants see the benefit it brings.

This program supports nature-based mitigation implementing action alongside education. With the rapid loss of vital ecosystems and the decline in pollinator populations, native grasses are crucial for offering nectar, pollen, and nesting sites non-native species may not provide them. Many school grounds consist of large areas of asphalt, which is typically not fully conducive to the health and well-being of

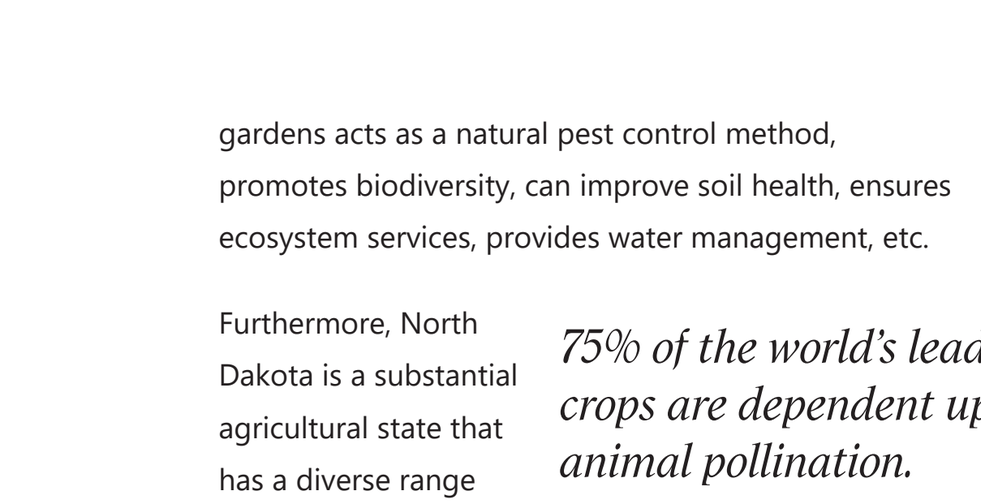
students, communities, or the environment. These often-unshaded areas create hot surfaces which can be uncomfortable for students. Additionally, the loss of habitat and wildlife replaced with impermeable surfaces can lead to flooding, runoff, and other associated hazards. Native plants are typically more resilient to local climate conditions and pests, ensuring a stable and sustainable environment for pollinator populations. Bringing in a diversity of species through pollinator

Swamp Milkweed

gardens acts as a natural pest control method, promotes biodiversity, can improve soil health, ensures ecosystem services, provides water management, etc.

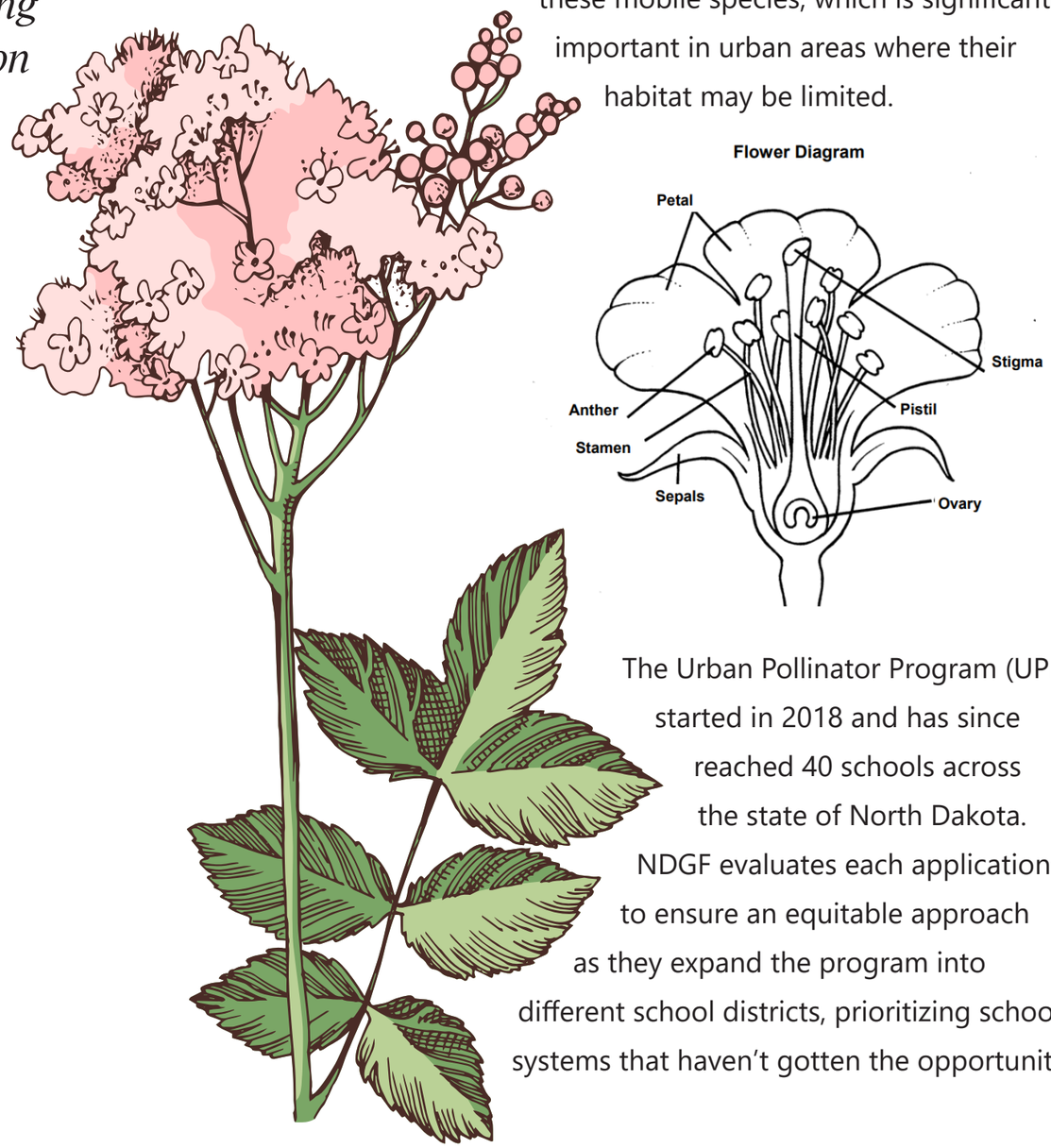
Furthermore, North Dakota is a substantial agricultural state that has a diverse range of products, and the main dependency of crop production falls on animal pollination. "Pollinators play a vital role in biodiversity, providing services for over 80% of flowering plants. Additionally, 75% of the world's leading crops are dependent upon animal pollination" (North Dakota Game and Fish, 2019). Declining pollinator populations are detrimental to the agricultural industry and can create impacts such as decreased crop yields, loss of crop diversity, economic losses, nutritional deficiencies, impacts on livestock, and long-term sustainability. Pollinator gardens can provide patches of habitat for these mobile species, which is significantly important in urban areas where their habitat may be limited.

75% of the world's leading crops are dependent upon animal pollination.



Honey Bees. Source: Ryan Moehring, USFWS

North Dakota is the largest producer of honey in the nation.



Queen of the Prairie

The Urban Pollinator Program (UPP) started in 2018 and has since reached 40 schools across the state of North Dakota. NDGF evaluates each application to ensure an equitable approach as they expand the program into different school districts, prioritizing school systems that haven't gotten the opportunity

to participate before adding additional gardens in already participating districts. One of the goals was to bring these pocket prairies to schools that can't easily access funds to go on field trips, etc. Some of the schools interested in the program have existing space with vegetable gardens in place, but adding pollinator gardens into the mix additionally integrates and emphasizes the importance of pollinators for creating dependent food systems and health ecosystems while utilizing already existing space, states Elisha Mueller (NDGF Conservation Biologist). This program operates and is sponsored in conjunction with the Natural Resources Conservation Service's Plant Materials Center (NRCS) to grow and distribute all the plants locally.

Support is offered to teachers interested in participating in the program but want more knowledge and information. NDGF provides workshops to give interested teachers the materials and education to bring this information back into the schools. This workshop curriculum gives post educational credits to those who participate. NDGF will post on their social media (Facebook, Instagram, etc.), their website, and through news releases to outreach and connect to teachers through their curriculum staff. If you or someone you may know is interested in learning more about the application process, eligibility, the educational guide, the pollinator kit itself, or any additional information on this free program, check out the NDGF webpage at: https://gf.nd.gov/education/urban-pollinator-program.

Targeting and involving educators and students directly in the creation and maintenance of these habitats fosters resilient futures for individuals by cultivating a deep understanding and commitment to sustainable practices. Having abundant natural spaces to observe promotes early appreciation and understanding of the importance of biodiversity and conservation, ultimately contributing to the health and resilience of natural ecosystems and their communities. Being outdoors and working with plants supports children in schools directly by promoting physical and mental health improvements, cognitive development, environmental stewardship, social skills, sensory development/ enhancement, and nutritional awareness fostering growth at all ages.

Continuous Resilience Shown Through Electrical Providers: December 2023 Ice Storm

by Kate Leitch

Disasters in North Dakota are continuous, but that does not stop our communities from standing strong and remaining adaptable. Our electrical infrastructure across the state shows one example. Electricity and the components of these critical systems are the crux of our ever-moving society. Many hazards can impact our electrical infrastructure, notably, extreme winter weather. Winter weather can encompass many factors including severely damaging ice storms. Such disasters can be a detrimental experience, especially if power goes out with undeterminable restoration times. North Dakota Electric Cooperatives and the electrical sector have strengthened their resilience by hardening electrical infrastructure to withstand and mitigate impacts from hazards and risks posed upon them.

Efforts to ensure the safety and security of North Dakota citizens are always ongoing but was specifically shown during an extreme and variable weather event that occurred from December 25th to 27th, 2023, causing substantial damages. Several rounds of precipitation hit the state producing snow, rain, and freezing rain creating thick layers of ice accumulations on critical electrical infrastructure.

Line crews spent tireless hours and days working to respond nearly 5,000 downed powerlines and poles to restore power. Freeing these lines from such dense ice accumulations was time consuming for all responders bracing the cold. At least 175 electrical workers provided mutual aid during this event to ensure the safety and security of our citizens, as disasters don't follow jurisdictional boundaries.

These mutual aid efforts to support our communities were critical during the response, and even though disasters are not fully preventable, understanding and incorporating mitigation actions and preventative measures continue to help us reduce risks and work towards lessening those impacts on communities to build resiliency.

Through close collaboration with the North Dakota Department of Emergency Services (NDDES), electrical providers/partners conducted an Electrical Systems Resiliency study that was completed in 2023.

Nearly all North Dakota electric

cooperatives continue to implement mitigation activities based on need and feasibility. Impacts from emergencies and disasters, such as this one, highlight where our vulnerability exists.

North Dakota became the first state in the nation to prepare a robust evaluation of our electrical infrastructure from the emergency management perspective.

The Electrical Systems Resiliency study evaluated historical hazard data, risk mapping, network analysis, and overviews of North Dakota's most recent severe events. This study highlighted both ongoing actions and potential opportunities to address the risks that are posed on our critical infrastructure. Collaborative efforts such as these expand information sharing to put data into a larger perspective of what works and what could be improved to ensure reliability and the security of such important systems.

Continuing to root our actions through storied history, data, and collaborative learning supports resiliency. Disasters bring unique challenges and vulnerabilities, but mitigation creates opportunities for the stability of services. Electrical providers support these efforts evaluating the likelihood, hazards, and vulnerabilities of their systems to understand risks and where to implement mitigation actions that are the most effective with available resources. This study supports data-driven decision making to ensures the continued access to basic goods, communication, health, and safety across North Dakota.

Community Coffee

Seniors

New England, ND
Mott, ND
May 30, 2024

Daniel Schwartz of Nexus Planning and Consulting, and grandmother Rosie Schwartz at the Hettinger County Community Coffee. Source: Daniel Schwartz.

NDDES planners traveled to Hettinger County on May 30, 2024, and held two Community Coffees with New England and Mott seniors who shared their concerns about the hazards and threats, as well as their wisdom for mitigating their impacts.

"The thing I think about the most is the power grid. We could lose everything. I don't like being uncomfortable when it is freezing."

Local Resident

WINTER & ENERGY CONTINUITY

Winter poses the greatest threat. Seniors worry about being trapped in their homes by snow drifts and extended power outages.

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Emergency Manager Kyle DeMark pointed out that an EMP could also damage the electrical grid even if it occurs elsewhere given the interconnectivity of power systems. "We are vulnerable if we have no wood stoves or gas to power generators," he explained.

FLOODING

Riverine and overland flooding typically becomes a persistent spring problem in Mott. Cannonball River flooding has prompted property acquisitions in southwest Mott through the years. However, the levees protecting the town are under increasing strain after years of repeated flooding. Residents worry that the levee could collapse if not repaired soon.

While New England has a higher topography, overland flooding in lower elevation areas impedes access roads.

Hettinger County Community Coffee. Source: Daniel Schwartz.

SPACE WEATHER

Space weather seems like an outlier, but it managed to disrupt farming operations this spring. A New England pastor heard from farmers whose equipment became inoperable during planting operations.

Precision farm equipment such as planters and applicators that use global positioning system (GPS) navigation, would have likely experienced periods of decreased precision, as various GPS satellites were impacted, and perhaps even intermittent outages during periods of strongest geomagnetic storms.

FIRE

Urban fires pose another threat given the proximity of structures and the number of abandoned buildings. Mott has experienced several structural fires in its downtown area. It's a concern shared by New England seniors, one of whom said, "If this building (senior center) caught fire, the whole block would go up" since it would take time to mobilize the volunteer fire department.

"If this building caught fire, the whole block would go up."

Local Resident

HAZARDOUS MATERIALS

One New England resident who runs the city dump worries about illegal activity. Banned items that contain hazardous materials place wells and water tables at risk of contamination.

Seniors still remember one unfortunate incident in which an individual died in 1988 after a large anhydrous tank spill occurred in western Mott. The chemical killed area trees and vegetation.

CYBER ATTACKS

Seniors complain about the number of voice phishing calls asking them to wire money for supposed hospitalized relatives and jailed grandchildren in need of bail, prompting one pithy response from a Mott senior who told the caller to leave her granddaughter to rot in jail, knowing the child was safe. New England seniors depend on one of their own, a computer guru, to help them with cyber security.

TRANSPORTATION INCIDENTS

Low water crossings also concern seniors who told the story of how an Oklahoma couple drowned in 2022 when the Cannonball River swept their vehicle away. Another driver who lost her way during a blizzard was a few minutes from going into the river when she called the Hettinger County Sheriff's Office for help.

Acknowledgements
Thanks to Hettinger County Emergency Management, Nexus Planning, New England Senior Center, Cannonball Senior Center

NORTH DAKOTA'S JOURNEY TO RESILIENCE: STATE'S ONGOING EFFORTS IN HAZARD MITIGATION

by Todd Joersz & Carl Meyer

North Dakota is committed to enhancing resilience & preparedness through ongoing mitigation projects & comprehensive planning.

Spearheading these efforts is the State Hazard Mitigation Team (SHMT), dedicated to strengthening the state's resilience against potential hazards. The SHMT leverages federal funding from FEMA's Hazard Mitigation Assistance (HMA) grant programs, provide critical financial support that covers up to 75% of project costs. Notably, North Dakota supplements federal assistance by adding an extra 10% to HMGP grants, reducing the local share to just 15%.

PROJECT COST SHARE:

75% Federal
10% State
15% Local

FEMA's Hazard Mitigation Assistance grants:

- Building Resilient Infrastructure and Communities (BRIC)
- Flood Mitigation Assistance
- Hazard Mitigation Grant Program

This collaborative framework has consistently produced successful mitigation outcomes across the state.

University of Mary Slope Stabilization: Phase I has been completed, paving the way for Phase II, which stabilizes the hill housing the university and protects vital infrastructure.

ND Resilient Infrastructure Project – Fargo Pump Station Flood Mitigation: This ongoing project addresses critical gaps in flood protection near the Red River Pump Station to safeguard the water treatment plant and flood-prone areas in Fargo.

City of Fargo Wastewater Treatment Plant Flood Protection Plan: In progress, this project aims to create a permanent flood protection solution using earthen levees and floodwalls, replacing less effective temporary measures.

Hazard Mitigation Investment in N. Dakota

$313M Invested in hazard mitigation in N. Dakota

@

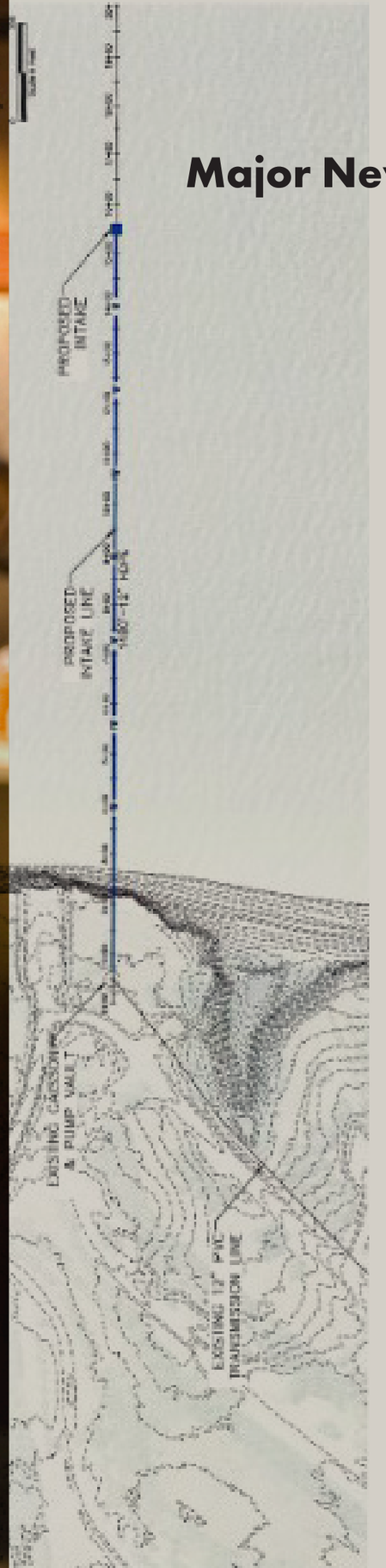
6:1 ROI Dollars saved in recovery per dollar spent in mitigation

=

$1.9B Estimated saved in recovery in N. Dakota

Since 1997, North Dakota has invested over $313 million in hazard mitigation initiatives, yielding a remarkable 6:1 return on investment. This translates to savings exceeding $1.9 billion while enhancing safety across communities.

But the $6 figure only accounts for damages and clean up following disasters. When considering economic impact that disasters wreak across communities, that figure jumps to a staggering $13 saved per $1 spent.



Major New Initiatives

Garrison Raw Water Intake Project

Phase One of the recently awarded Garrison Raw Water Intake Project is underway, with 85% of the project's $935,000.00 being covered by HMGP (75%) and state (10%) funding. The project will replace the community's raw water intake system and install a new intake pipeline at the bottom of the Lake Sakakawea Reservoir (Missouri River). Along with the new pipeline, the project will include new pumps, upgrades to the existing caisson, a new at-grade pump house, and new controls. This new system will ensure access to water for the community and protect against lowering water levels. Phase Two of the project, which includes construction, will be awarded once the Phase One engineering and design is completed.

Major New Initiatives:

South Bismarck Flood Control Project

The recent South Bismarck Flood Control Project, funded through FEMA's Flood Mitigation Assistance program, aims to enhance flood protection in the area. This $78 million project, with $50 million in federal funding, focuses on improving public and critical infrastructure to mitigate flood risks. Upon completion, the project will adjust Flood Insurance Study maps, removing properties from the 100-year regulatory floodplain and potentially reducing flood insurance costs for homeowners. Phase One of the project has been awarded, with Phase Two being awarded upon Phase One completion.

Growing Resilience: Grant Funding Opportunities

The North Dakota Department of Emergency Services (NDDES) has announced grant funding availability through two HMA programs: Flood Mitigation Assistance (FMA) and Building Resilient Infrastructure and Communities (BRIC). The application period for 2024 is approaching, and interested parties are encouraged to engage actively.

As North Dakota continues its efforts in 2024, the State Hazard Mitigation Team remains dedicated to building a resilient and prepared future for all residents. Through strategic planning, community engagement, and vital infrastructure projects, the state demonstrates its commitment to safeguarding lives and property against future hazards.

For further information, please contact

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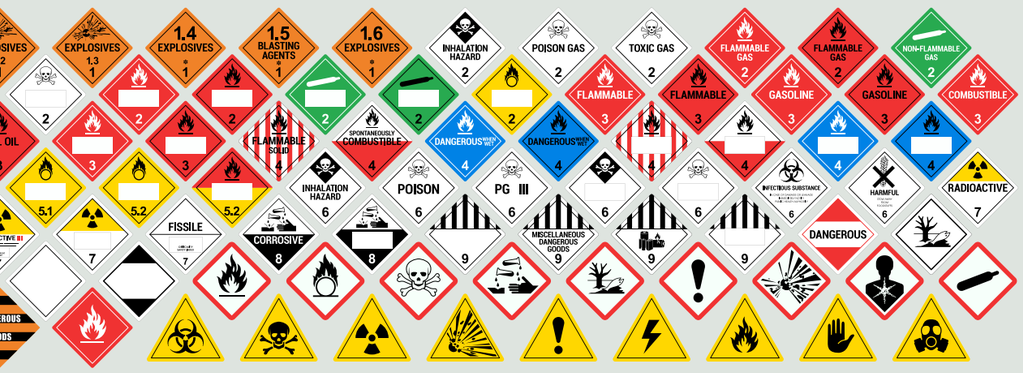
Hazard Mitigation Update

By Jeff Thompson & Randy Jacobson

Promote and enforce safe handling, storage, and disposal of hazardous materials daily.

-NORTH DAKOTA DEPARTMENT OF EMERGENCY SERVICES, HOMELAND SECURITY HAZARDOUS CHEMICALS SECTION



The Department of Homeland Security is the main contact for the Hazconnect system, a system used to report storage of hazardous chemicals in North Dakota while working side by side with industry partners to help them report and improve accuracy of information for first responders. Hazconnect also houses the state spill system, allowing us to coordinate and work with the ND Department of Environmental Quality, ND Industrial Commission, and the ND Department of Agriculture to ensure that all releases are reported and properly managed. We continue to seek additional state partners, such as the ND Department of Trust Lands, to help them gain access to information in the system that is valuable in accomplishing their mission.

The Hazardous Chemical Section conducts outreach and support for local and tribal emergency managers and fire departments. From July 1, 2023, to June 30, 2024, the Hazardous Chemical Section attended the Dunn County LEPC meeting on September 15th, 2023. The section also helped to facilitate the State Emergency Response Commission (SERC) meeting on December 6th, 2023, and gave updates on reporting and spills to the SERC which is comprised of both industry and state partners. NDDES Staff support the SERC continuously.

On March 12th, 2024, staff attended the northwest regional emergency manager meeting in Mohall to do a presentation on Hazconnect and answer questions about its usage. Later in the month, on March 19th staff was in Logan County for the local emergency planning committees (LEPC), meeting and to help get local fire departments into the Hazconnect system. On, April

18th Dickey County was assisted with questions on a new facility and gathering of information needed for the county to prepare for the size and chemicals that will be at the facility. In May, staff attended the Stark County LEPC with representatives from the Environmental Protection Agency (EPA), Region 8. Discussion was held on how the state coordinates with the EPA on releases and reviews statutes of authority assigned to the EPA. Staff also attended planning meetings and helped facilitate a tabletop exercise in Belcourt with the Turtle Mountain Band of the Chippewa Tribal Nation throughout May. Staff also assisted Divide County with the LEPC meeting and Hazconnect presentation on June 26th.

Supporting the safe handling, storage, and disposal of hazardous materials encourages local emergency managers, first responders, elected officials, and industry partners to accomplish goals while maintaining safety and building resilience. A new feature in the Hazconnect allows industry partners to view all releases for a company rather than restricting the view to the inputted spills of an individual user. This allows better management and follow-up of releases. Outreach and training will continue to be a priority as we look for new and better ways to accomplish our mission proactively. ✖

Jeff Thompson, Hazardous Chemical Officer

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Randy Jacobson Hazardous Chemical Coordinator

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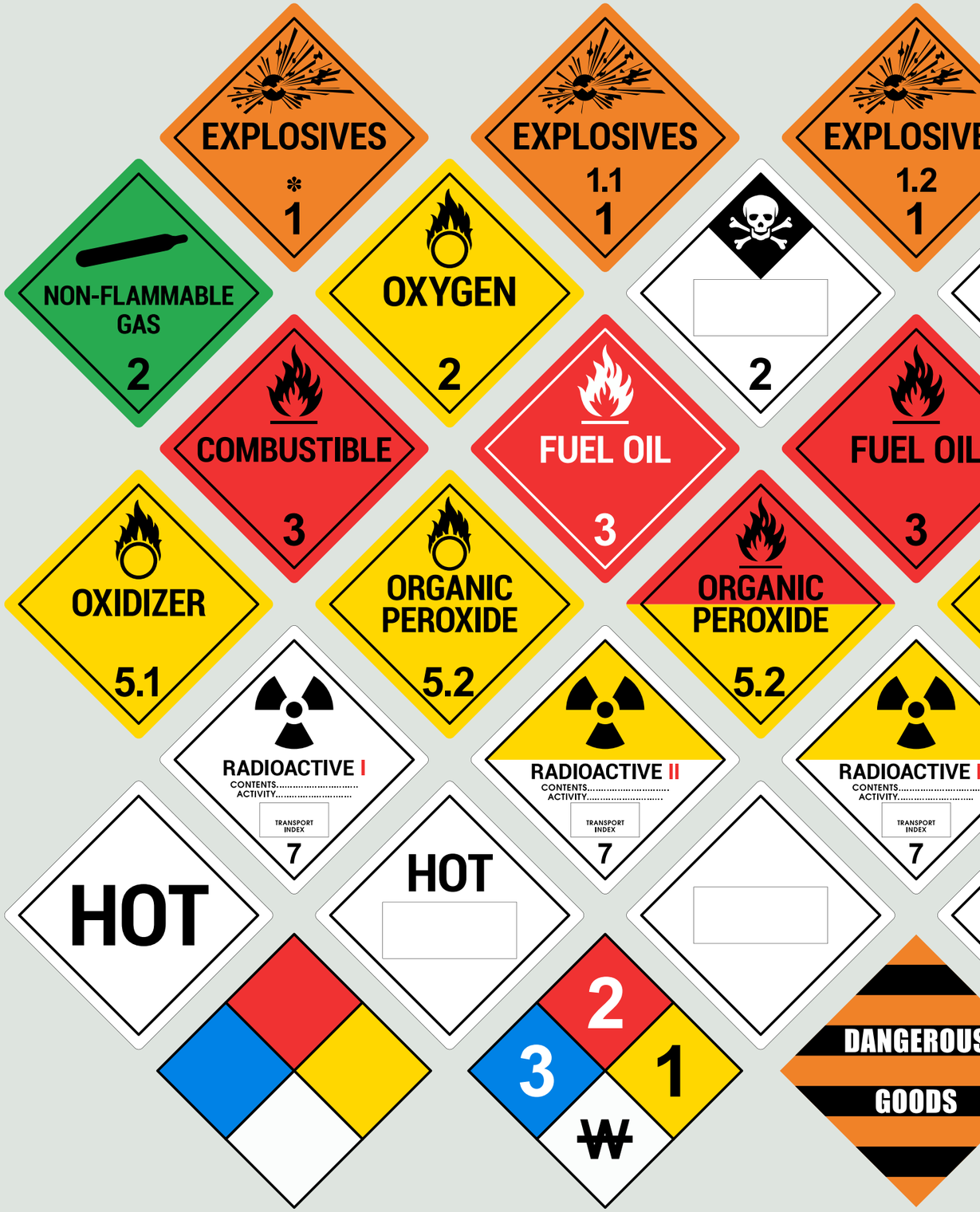

ND Watch Center & State Emergency Operations Center Ensures a Resilient North Dakota

By ND Watch Center

In keeping with its vision to provide a safe, secure, and resilient state, the North Dakota Department of Emergency Services (NDDES), Division of Homeland Security, collaborates with a broad base of public and private organizations to ensure all-hazards response readiness.

The 24/7 ND Watch Center is responsible for proactively monitoring incidents, emergencies, and events within the State of North Dakota, regionally and nationally that could require a state response and ensures operational readiness of the State Emergency Operations Center (SEOC). The center is responsible for engaging with stakeholders to provide 24/7 whole of government access to public safety and overseeing information collection, analysis, and dissemination to local, tribal, state, federal, voluntary, and private sector partners to aid in their response roles.

The ND Watch Center provides around-the-clock response coordination with its partners to ensure timely delivery of required resources and assets; compiles initial damage assessment information; evaluates information to determine the potential for state and federal declarations; and produces and distributes documents and reports useful to emergency and disaster operations.

ND Watch Center staff coordinated many responses between July 1, 2023, and June 30, 2024, including 1,019 hazardous materials incidents reported through the State's Unified Spill Reporting System (Hazconnect). NDDES staff also coordinated state response for wildland fires, hazardous materials spills,

potable water shortages, missing persons, Public Alerts, downed/ missing aircraft, train derailments, flooding, severe winter storms, tornadoes, power outages, hail, rain, and high-wind storms that produced significant property damage and threatened lives.

In addition to the December 25 – 27, 2023 Ice Storms which primarily impacted electrical infrastructure in the eastern and southeastern portions of ND; the ND Watch Center and NDDES coordinated a response to the Missouri River Ice Jam from February 28th to March 1st. On February 28, 2024, an ice jam began forming at the confluence of the Heart and Missouri Rivers between Bismarck and Mandan. Rapid rises in the level of the Missouri River threatened homes,

Above: Missouri River Ice Jam Near Fox Island Boat Ramp. Source: Staff Sgt. Samuel Kroll

Below: Missouri River Ice Jam Mission. Source: Sara Weigel Ness

requiring a whole of government response and partial activation of the State Emergency Operations Center (SEOC). The ND National Guard used Blackhawks with Bambi buckets to drop water on the leading edge of the ice jam which eventually freed the jam and resulted in a decrease in river levels. The response took a coordinated effort that included various local, state, and federal partners including the City of Bismarck, Burleigh, and Morton County Emergency Management, the ND Department of Water Resources, ND Department of Transportation, ND Highway Patrol, ND National Guard, ND Department of Environmental Quality, ND Health and Human Services, ND State Radio, Governor's Office, National Weather Service, and the United States Army Corps of Engineers.

These two major responses required critical relationships to be built and used to address the issue at hand. Exercising relationships with technical experts such as those from NDDWR and NWS allows planners to look to the future of ice jams. Maintaining and expanding on proactive efforts to identify a matrix of potential solutions to provide just-in-time mitigation may create a sense of continuity according to the NDDWR State Engineer, John Paczkowski. Considering future environmental conditions, timeframe, cost, and long-term response actions are aspects of ice jams and other incidents that must be carefully considered. Gathering, analyzing, implementing, and distributing information requires a whole of government approach, as demonstrated by the successes of the 2024 response activities.

Community Coffee

Access & Functional Needs

FARGO, ND
June 24, 2024

Community Coffee, Fargo Public Library. Source: Alison Vetter

This community coffee was held to gather feedback on the threats and hazards from those experiencing access and functional needs. It was an open meeting with direct invites to organizations that serve various needs of the population including the food pantry, YWCA, new American and refugee resettlement, senior care, and low-income daycare.

LANGUAGE AND TRANSLATION

The first and largest theme that emerged was language and translation. When it comes to warning, how can we reach other languages more immediately? How can we prepare ourselves to reach other languages in times of crisis? Where can they find help and how do they know who to trust?

"In my daycare we have 17 different first languages... and they're not English and Spanish."

Things to Consider

New Americans present suggested building inroads with cultural groups and identify a trusted leader/ liaison within that group to aid in two-way communications

Consider having a bank of pre-translated materials ahead of upcoming seasonal threats and hazards, ie the difference between watch and warning. NOAA has some Spanish materials here.

Resources

ND has a contract (OMB #489) with NASPO ValuePoint that you can utilize for on-demand remote interpreting and document translation services.

Check out DeafLEAD for on demand ASL translation services, or utilize services through the ND School for the Deaf.

CLEAR AND DIRECT MESSAGES

“If it looks scary, it becomes scary.”

Another poignant perspective came from a representative of the YWCA, calling to mind the trauma residents have experienced in their lives, and the possibility for spiraling when receiving emergency alert messages. She encouraged plain language, concise, actionable, and ***very directive*** communications.

Community Coffee, Fargo Public Library.
Source: Alison Vetter

A research-backed alerting template:

[SOURCE]: [DESCRIPTION OF THREAT]. Those in [LOCATION] could experience [EFFECTS]. You should [TAKE THIS ACTION] by [TIME].

Thanks to the Fargo Library, Cass County Emergency Management, City of Fargo, KLJ, and NDDES

Hazard Mitigation Actions

Image: 2024 Missouri River Ice Jam, Bismarck

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies		Funding Source	Goal Completion, Short or Long Term	Status
Planning and Regulatory Mitigation Actions									
PR-1	Streamline carbon capture permitting to incentivize industry to sequester greenhouse gas emissions so North Dakota achieves carbon neutrality by 2030	Hazardous Materials	Goal 5 Objective 5.4	High	NDDEQ, NDDMR (Lead)		Climate Pollution Reduction Grant	2030, Long Term	NDDMR, 2024: Several permits have been issued and more are in the queue which helps operators and agency staff standardize the process. DMR is in conversations with the Ground Water Protection Council to build a national standardized carbon capture, utilization, and storage (CCUS) module. NDDEQ, 2024: Serves an advisory role, reviewing any carbon capture permits and providing feedback to NDDMR.
PR-2	Evaluate and promote local jurisdictions to adopt landscape ordinances and water conservation ordinances to improve water quality and conserve natural resources	Drought	Goal 5, Objectives 5.1, 5.3, 5.4	High	~~NCRS (Lead),~~ NDDES (Lead)		HMGP, BRIC	2028, Long Term	~~NCRS, 2024:~~ NDDES, 2024: Through mitigation plan updates, NDDES promotes the involvement of local and tribal water boards and planning commissions to encourage sustainable practices.
PR-3	Enforce compliance with new dam design standards as part of the permitting process	Dam Failure	Goal 3 Objective 3.7	High	DWR (Lead), NRCS, BIA		NRCS Rehabilitation Funding, DWR Budget	2026, Short Term	DWR, 2024: New North Dakota Dam Safety Standards went into effect January 1, 2024. These standards are being implemented as part of the review process for construction permit applications for dams. NRCS, 2024: NRCS does not do permitting, but we have incorporated the new dam design standards into our Fordville, Larimore, Matejcek, Olson, and Senator Young Dam rehabilitation preliminary design work that has been in progress throughout 2024. BIA, 2024: No update provided.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
PR-4	Update hazard classification of existing dams to align with new classification policy	Dam Failure	Goal 3 Objective 3.7	High	DWR (Lead), NRCS, BIA	NRCS Budget (staffing), DWR Budget (staffing)	2026, Short Term	DWR, 2024: This process has been started and will be ongoing. NRCS, 2024: None to date BIA, 2024: No update provided.
PR-5	Continue to implement Safety Corridors to decrease accidents in areas with a high history of accidents	Transportation, Severe Winter Weather, Geologic Hazard, Hazardous Materials	Goal 3, Objective 3.8	High	NDDOT (Lead), NDHP	FHWA	2024, Short Term	NDDOT, 2024: Will continue to implement new Safety Corridors with three new ones planned. Based on a review of crash data, consultation and approval from the affected Tribes and input from maintenance, design, safety, programming, districts, and the highway patrol, the following corridors are proposed for Round #2 of safety corridors: ND 57 – West of Forst Totten to US 2 (Devils Lake), I-29 – South Fargo to ND 46, and ND 22 – ND 73 to ND 23. NDHP, 2024: Continue to patrol safety corridors and emphasize enforcement during overtime enforcement projects.
PR-6	Reduce unsignalized at grade crossings in the state by 20 per year	Transportation Hazards, Hazard	Goal 3, Objective 3.8	High	NDDOT (Lead)	FHWA, NDDOT Budget	2024, Short Term	NDDOT, 2024: No crossings closed so far this year according to the NDDOT Rail Manager.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
		ous Materials						
PR-8	Engage partners to update data that is used by the environmental justice screening and assessment tool, so the tool is more accurate and applicable	All Hazards	Goal 2, Objective 2.1, 2.3, 2.5 and Goal 5, Objective 5.1	High	NDDES (Lead), NDDEQ, NDDOT	EPA	2025, Short Term	NDDES, 2024: Has not been initiated during this reporting period. NDDEQ, 2024: The Hazardous Waste Program is implementing environmental justice through the use of EJ screen to identify areas of disproportionate impact. While permitting authority does not exist for EJ factors, this can help identify areas that may need additional outreach and education during the permitting process. NDDOT, 2024: No updates or data changes have been requested by NDDOT yet this year.
PR-9	Provide technical and financial assistance to local and tribal jurisdictions developing or updating MHMPs and assist communities with other mitigation-planning related initiatives	All Hazards	Goal 1, Objective 1.3	High	NDDES (Lead) NDFS, DWR, NDDA, NDSFM	HMGP, BRIC, FMA, USFS, BLM, DOI	2028, Long Term	NDDES, 2024: Hazard mitigation staff continues to work with jurisdictions to apply for grant funding as plans require updates and as projects arise. NDFS, 2024: No requests. DWR, 2024: We've hosted multiple county and township meetings to increase NFIP participation and awareness. We've also presented to the Township Officers Association and the States Attorney's Association on county/township zoning. NDDA, 2024: Provides up-to-date information sharing and relationship building to support partnerships in planning through bi-weekly Ag Disaster Calls.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								NDSFM, 2024: Continues to review new construction plans with the MHA Building Department for compliance with the fire codes as requested.
PR-10	Identify and enact GIS improvements or data creation to leverage information as made available from external partners in the most efficient means possible for the end goals of desktop and web-based GIS products for analysis and common operational decision making	All Hazards	Goal 2, Objective 2.1 and 2.4	High	NDDES (Lead) NDIT, DWR, NDDOT, NDSFM, NDHHS, NDDA, NDFS, NDDMR	HMGP, BRIC, State Funds (NDGS Budget), USGS funded FEDMAP, STATEMAP, EDMAP, SMART	2026, Short Term	NDDES, 2024: Identified the need for partnership with stakeholders to collect critical infrastructure and special events information. Currently building web-based tools to create a capability to enable stakeholders to accomplish this information collection. NDIT, 2024: Continue to make state agency GIS data available for viewing, downloading, and web streaming via the State's GIS Hub, the Hub Data Portal and enterprise database solution. DWR, 2024: We have completed the collection of statewide Q2 LiDAR data with the availability of the data in Fall 2024. USGS 3DEP versions of these data are also now available on our servers. We have also completed 25 of the largest cities at the QL1 LiDAR level with anticipated delivery in late 2024. A statewide building footprint dataset has also been delivered along with 15cm resolution statewide aerial photography which will be available in August 2024. WMS services are available for 85% of our historical aerial photography as well, which comprise over 150,000 photos ranging between 1938 and 2023.

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									NDDOT, 2024: Currently has a SMART grant application for a mapping app that will further this goal. By implementing a multi-agency Transportation Management Center (TMC) that incorporates a SMART Corridor along I-29. This implementation strategy generated a wide array of next-generation solutions that require systematic integration to achieve the intended goals of the plan. The list of integration needs includes, but is not limited to, variable speed limits and ramp metering on I-29, crowd-sourced and connected vehicle data to expedite incident identification and clearance, automated vehicle location and computer-aided dispatch integration to monitor and manage incidents, an updated Smartphone application to actively send hands-free/eyes-free alerts to drivers of events, and multiple smart work-zone applications. Integration of these various platforms is critical before the TMC and SMART Corridor can operate as intended. NDSFM, 2024: Working with the United States Fire Administration to usher in a new fire reporting platform that will align multiple different agencies with fire data and add further data capabilities. Expected completion date June 1, 2026.

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								NDHHS, 2024: Working to identify essential data elements, continue to work to get GIS maps up to date, and how to utilize this identified data. NDDA, 2024: In the process of working with the Aeronautic Commission to establish Meteorological Evaluation Towers (MET) for aerial sprayer planning. NDFS, 2024: Partners with ESRI to build agency GIS capacity, modernize business workflows, share information and data across teams and with the public. Launched NDFS ArcGIS online organization and embarked on meaningful workforce development through formal GIS training plus effective technology transfer working sessions to build GIS Capacity. Developed a WebGIS governance plan to establish best practices for web GIS management. Inventorying data and workflows and beginning to develop effective geospatial tools for staff and the public. NDDMR, 2024: Updated layers to Oil and Gas map viewer to make more items available to users. Automated the posting of several datasets to make them timelier.
PR-11	In accordance with the NDGS long range geologic mapping plan,	Geological	Goal 2, Objective 2.1	High (was a Low	NDGS (Lead), NDIT	NDGS Budget	2028, Long Term	NDGS, 2024: 16 24K Quadrangles have been completed. 24 remain. NDIT, 2024: No update provided.

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	the NDGS will complete the detailed geologic mapping of the remaining 25 - 7.5' quadrangles that cover Cass County	Hazards		priority in the last plan update)				
PR-12	Combined with PR-7: Promote the Firewise and Community Wildfire and Protection Program. Update ~~all 13~~ currently outdated Community Wildfire Protection Plans	Fire (Wildfire)	Goal 2, Objectives 2.1, 2.2, and 2.4	High	NDFS (Lead), NDSFM, BIA	NDFS Budget, USFS grant	2024, Short Term	NDFS, 2024: Encourages counties to develop CWPPs through the CWGD program. No action to report. NDSFM, 2024: Partnered with DEQ and NDFS to host online lunch and learn for fire chiefs to learn more about wildfire laws and open burning in the state. This occurred in April, but we plan to continue each spring prior to peak fire season. BIA, 2024: No update provided.
PR-13	Enact basin wide hydrologic studies to understand flood extent and to educate communities on risk; and to develop a strategy for potential mitigation activities	Flood	Goal 5, Objectives 5.2 and 5.3	Medium	DWR (Lead), USACE	Community Assistance Program-State Support Services Element (CAP-SSSE), RiskMAP, DWR	2028, Long Term	DWR, 2024: The Investigations Section completed the study at Rice Lake for the Emmons County Water Resource Board and continues work on the flood risk reduction investigation for the City of Zap (Mercer County). The DWR provides funding and technical assistance for basin-wide water and land management planning. This has included assistance to Joint Water Resource Boards (JWRBs). On a biennial basis, the DWR completes a Water Development Plan. As required by NDCC 61-02-01.3, the DWR shall develop and maintain a comprehensive water development plan that includes a water project

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					General Funds, HMGP, BRIC, FMA, USACE SJ, FPMS, 22 (PAS), 205, GI			inventory. The last Water Development Plan was completed in January 2023. ND DWR/Silver Jacket Project updates: 1) Missouri River Basin Regional Non-Stationarity Study – pending completion Fall of '24 2) Sherwood / Westhope Discharge Frequency Gage update – completed June '24 -- pending comments 3) Mouse River Basin Inundation Mapping Project – pending completion Winter '24 4) Mouse River Basin Precip, Soil Temperature & Moisture Gage project – pending completion Fall '24 5) Red River Bathymetry Collection—pending completion Jan '25 6) ND Flood History Project – pending completion Fall '24. 7) Statewide Gage Flow Frequency Analysis – pending completion Jan '26 8) ND StreamStats Update—pending final approval & funding—projected start is Sep '24 9) Upper Missouri River Flow Frequency Study—pending completion Winter '24 10) ND Flood Management and Resilience Workshops—pending National Silver Jacket Approval NLT Oct '24

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								USACE, 2024: ND Flood History Project – pending completion Fall '24; Upper Missouri River Flow Frequency Study – pending completion Winter '24; Medora Flood Risk Analysis – pending completion Fall '24; Missouri River Basin Quantitative Climate Change – in process; Upper Missouri River Basin Plains Snow and Soil Moisture Monitoring Network – pending completion Fall '27
PR-14	Review regulations/permit conditions for addressing secondary or tertiary effects of increased climate variability	Hazardous Materials	Goal 3, Objective 3.4	Medium	NDDEQ (Lead), NDNG, NDPSC	EPA Grants, DEQ Budget	2028, Long Term	NDDEQ, 2024: The Hazardous Water Program will assess current climate conditions through the use of FEMA planning materials (such as floodplain maps), and review historical weather data to determine appropriate controls and countermeasures for permitted entities. NDNG, 2024: Continue monitoring of environment and ensure collaboration with DES and other agencies is initiated early in any potential response. NDPSC, 2024: No update provided.
PR-15	Develop Repetitive Loss and Severe Repetitive Loss management strategy document	Flood	Goal 3, Objective 3.3	Medium	NDDES (Lead), DWR	HMGP, BRIC, FMA	2024, Short Term	NDDES, 2024: Will collaborate with DWR to assess repetitive loss and severe repetitive loss properties on a regular basis. DES continues to promote acquisitions of properties during planning meetings by providing data regarding repetitive loss and severe repetitive loss properties. DWR, 2024: DWR continues to provide education to local communities on an ongoing basis regarding

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								available programs and resources. DWR also continues to support DES in this effort, including grant-related education and application efforts.
PR-16	Evaluate and promote local and tribal jurisdictions to adopt regulatory setbacks or other alternatives to reduce the risk of property loss in high-hazard areas	Geological Hazards, Flood, Fire	Goal 3, Objective 3.1	Medium	NDDES, Commerce (Co-Leads)	HMGP, BRIC	2028, Long Term	NDDES, 2024: Planning Section staff evaluated four local mitigation plans and provided over ten counties technical assistance related to mitigation planning which addresses capability building and other mitigation actions. Commerce, 2024: Provided guidance and resource direction to nine jurisdictions on building codes, which included suggested code requirements and alternative solutions not in current code.
PR-17	Develop a digital toolbox with updated NDDES Drought Resource Guides to assist local and tribal partners with drought planning, management, and informational resources	Drought	Goal 1, Objective 1.1; Goal 2, Objective 2.1	Medium	NDDES and NDSU Extension (Co-Leads), Farm Service Agency, NDDA, NDFS, DWR, NDHHS,	USDA	2024, Short Term	NDDES, 2024: Will initiate update in September of 2024 with involved stakeholders. NDSU Extension, 2024: Awaiting initiation. FSA, 2024: Collaborating and providing information to update the guide. NDDA, 2024: Awaiting initiation NDFS, 2024: Awaiting initiation DWR, 2024: DWR's Drought Disaster Livestock Water Supply Assistance Program provides assistance for water supply projects that support livestock impacted during drought declarations and is administered according to N.D.A.C. Art. 89-11. The Commission may provide up to 65 percent cost-share for Drought Disaster Livestock

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					NRCS, USFS			Water Assistance Program projects, but no more than $10,000 per project, and three projects per applicant. Awaiting further initiation of the update. NDHHS, 2024: Awaiting initiation. NRCS, 2024: Awaiting initiation USFS, 2024: Awaiting initiation
PR-18	Develop siting guidance and education materials for critical infrastructure; with the goal of educating infrastructure developers to consider hazardous material release impacts	Hazardous Materials	Goal 1, Objective 1.1, and Goal 2, Objective 2.1	Medium	NDDES (Lead), NDDEQ, NDDOT, NDNG	EPA	2026, Short Term	NDDES, 2024: No action at this time. NDDEQ, 2024: No action at this time. NDDOT, 2024: No action at this time. NDNG, 2024: No action at this time.
PR-19	Form a committee to study how mitigation projects enacted by SHMT partners have resulted in losses avoided	Flood	Goal 3, Objective 3.5	Medium	NDDES (Lead), BND, DWR, NDDOT, NRCS, USACE, NDGS, USGS, EDA,	HMGP, BRIC, FMA, USACE SJ, FMPMS, 22 (PAS), 205, GI	2027, Long Term	NDDES, 2024: Planners have worked with NDDWR staff to assess losses avoided within this plan. No other progress at this time. BND, 2024: No progress. DWR, 2024: No progress. NDDOT, 2024: Committee has not been formed yet. No progress at this time. NRCS, 2024: No progress.

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					USBOR, NDNG, NDDMR, JSND			USACE, 2024: USACE Appendix G: Annual Flood Damage Reduction Report completed; Exploring FMPS project ideas utilizing CWMS program. NDGS, 2024: No progress. USGS, 2024: No progress. EDA, 2024: No progress. USBOR, 2024: No progress. NDNG, 2024: No progress. NDDMR, 2024: No progress. JSND, 2024: No progress.
PR-20	Integrate mitigation plans with comprehensive plans, climate action plans, drought mitigation, and other resiliency initiatives (Note this was previously listed as: *Promote integration of mitigation comprehensive plans*)	All Hazards	Goal 1, Objectives 1.1, 1.2, 1.3	Medium	NDDES (Lead), Commerce	HMGP, BRIC	2028, Long Term	NDDES, 2024: Promoted integration of the plan throughout the mitigation planning process and following the approval. Stark County's mitigation plan will be incorporated into its capital improvement plan. Commerce, 2024: Working with local and tribal planning entities to explore alternatives and integration of comprehensive plans with their mitigation plans and other planning initiatives. Will be requesting additional funding from the State Legislature for community planning. Participating in the Midwest Energy Efficiency Alliance (MEEA) to create education tools for local and regional alternatives and code understanding and upgrades.

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PR-21	Foster greater participation of cultural and historical preservation organization in the planning process	All Hazards	Goal 1, Objectives 1.1, 1.3	Medium	NDDES (Lead) SHSND, ~~NDSU Extension~~, NDPR	National Parks, DOI. SHSND Budget	2024, Short Term	NDDES, 2024: There is an ongoing effort to collaborate with partners on projects, training, and the creation of educational materials. This action remains in place. SHSND, 2024: Contracted for the creation of a statewide historic archaeology context. NDPR, 2024: Integrated cultural and historical concerns throughout project planning inclusive of the SHPO and various THPO stakeholders
PR-22	Advocate federal partners to review and update data sources (flood maps) that are cited in federal regulations	Flood, Hazardous Materials	Goal 2, Objective 2.1 and Goal 3, Objective 3.4	Low	NDDOT (Lead), NDDES	EPA, FMA	2027, Long Term	NDDOT, 2024: Received funding to review flooding and flood mapping in the Northern Red River Valley. NDDES, 2024: Mitigation planning efforts support the acknowledgment of needed updates to flood maps. No further progress at this time.
PR-23	Develop or acquire systems to integrate climate impact data with surveillance data on new and emerging plant, animal, and human diseases	Infectious Disease	Goal 1, Objective 1.2	Low	NDDA (Lead), NDHHS, NDSU Extension, NDAWN/NDSCO, NDFS	USDA	2028, Long Term	NDDA, 2024: Look for opportunities to integrate climate impact data with surveillance data already being gathered on plant, animal, and human diseases. NDHHS, 2024: Although climate change can impact spread vectors of disease, mosquito borne diseases within ND are not expected to change. The vectors of Dengue and Malaria geographically have not spread to ND. The vectors for WNV are well established in every county in ND. Warmer springs/longer summers could impact how long the vector is present and spreading WNV, but no significant changes have been

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								seen. Tickborne disease could be impacted by warmer weather. NDHHS added Alpha-gal Syndrome to the reportable diseases list in 2024. NDHHS and Laboratory Services is working to conduct active surveillance in conjunction with passive surveillance to determine if new tick species are established within the state, as well as determine if the main vector of Lyme Disease, Ixodes scapularis also known as the deer tick/black legged tick, is spreading further into ND. NDSU Extension, 2024: In partnership with NDDA conducted monitoring efforts on invasive diseases and insects through crop survey efforts. Data can be overlaid with climate data once an invasive pest is detected. NDAWN/NDSCO, 2024: Use already developed NDAWN tools to enhance the ability to detect plant diseases. Work with researchers to enhance current or develop new plant disease guidance as data progresses. Additional weather stations continue to be constructed throughout North Dakota. NDFS, 2024: The NDDA followed the emerald ash borer (EAB) response plan and announced confirmation of emerald ash borer in LaMour County, ND on August 22, 2020. NDDA is the state pest regulatory agency. NDFS and city foresters assisted

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								NDDA with the 2024 survey of 230 sites for EAB. Tree diversity reduces vulnerability to invasive tree pests. 145 communities participate in the ND Tree inventory and planning tool: https://www.ndcitytrees.org, and NDFS annual forest health report: https://www.fs.usda.gov/foresthealth/docs/fhh/NDFHH_2022.pdf. EAB outreach, education, and response is coordinated with NDFS, NDDA, and NDSU Extension.
PR-24	Conduct outreach with local and tribal zoning and planning boards and commissions to encourage development of master and/or comprehensive plans	All Hazards	Goal 1, Objective 1.1	Low	Commerce (Lead) NDSFM, NDDES, DWR	Commerce Budget, HMGP, BRIC	2028, Long Term	Commerce, 2024: Submitted multi-state grant with the MEEA to increase building code education, provide energy efficiency model approach and work jointly with city planners on comprehensive community plans. Average two calls per week from consumers regarding building codes and understanding current building codes, ADA compliance, and zoning regulations. NDSFM, 2024: Continue to work with MHA Building Department. NDDES, 2024: Held a Plan Developers meeting on May 23, 2024, that provided technical assistance when integrating building codes into local and tribal mitigation planning. DWR, 2024: The DWR and State Water Commission now require water supply project sponsors seeking construction funding to complete and submit capital

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								improvement plans with applications. DWR will also cost-share on the completion of such plans. NDSU Extension, 2024: In partnership with NDDA conducted monitoring efforts on invasive diseases and insects through crop survey efforts. Data can be overlaid with climate data once an invasive pest is detected.
PR-25	Advance the adoption of building codes and encourage the development of ~~zoning ordinances develop and update building codes and~~ zoning ordinances through outreach with local and tribal zoning and planning boards and commissions	Flood, Fire (Wildfire, Urban Fire), Drought, Severe Summer Storms, Winter Storms, Dam Failure	Goal 3, Objective 3.1,3.7	Low	Commerce (Lead), NDDES	HMGP, BRIC, ND Department of Commerce general fund (staff time), ND Insurance Department	2028, Long Term	Commerce, 2024: Conducted training titled "ND Building Codes" during the Mitigation Planners Meeting on May 23, 2024. Staffing has limited outreach and education, but the grant application with MEEA includes 1.5 staff to expand outreach and education along with help communities update their building codes and compliance activities. NDDES, 2024: HM created BRIC FY23 project application for ND Insurance Dept to do a Building Code Study

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PR-26	Review EAPs to ensure these plans address actions to reduce the potential consequences of dam failure	Dam Failure	Goal 3, Objective 3.7	Low	DWR (Lead), USBOR, USACE, NRCS, BIA	DWR Cost Share Program, HHPD, USACE FPMS, 22 (PAS)	2024, Short Term		DWR, 2024: Requirements for EAPs were updated and incorporated into the new North Dakota Dam Safety Standards, effective January 1, 2024. USBOR, 2024: Updating EAPs to the newest format, EAP orientation meetings for Heart Butte, Dickinson, and Jamestown dams were conducted Spring of 2024. USACE, 2024: USACE National Inventory of Dams – reoccurring; Inundation Mapping - reocurring NRCS, 2024: No work on this to date in 2024. BIA, 2024: No update provided.
Structural and Infrastructure Mitigation Actions									
SI-1	Combined with SI-6 and SI-10: Promote electrical infrastructure resilience by expanding mitigation ~~cybersecurity~~ methods and installing back-up generators and other redundancies for critical infrastructure such as, but not limited to, lift stations and water towers. Assist	All hazards, ~~cyberattack~~	Goal 3, Objective 3.4, Goal 4, Objectives 4.1, 4.2, 4.3, and 4.5	High	NDDES (Lead), NDSLIC, SEB, CISA, NDaREC, NDSLIC	CSIS, State Homeland Security Grants, BRIC, HMGP	2028, Long Term		NDDES, 2024: HM and Planning staff support local and tribal grant applications for generators along with encouraging other modes of electrical infrastructure redundancy. HM Staff continues to aid applicants with developing project applications and implementing awarded generator projects. NDSLIC, 2024: Continued progress, meeting and conducting outreach with the electrical sector, promoting protection, prevention, and resiliency. SEB, 2024: Educated electricians on the use of backup generators, solar and wind generation during inspections and held classes each year; staff also discusses code changes with electricians.

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	applicants and subapplicants with receiving funding.							CISA, 2024: Attended the Rural Electrical Cooperative meeting and gave an informative presentation regarding resources for power distributors. Gave threat and capability brief to Infraguard with Minnkota in the present to secure power systems. Working with CI Staff in NDDES to update security clearance staff to attend Dept of Energy meetings which will be facilitated by NDSLIC eventually. Will start doing quarterly threat briefs in the future, looking to expand security assessments for McKenzie Co-op and other electric infrastructure. NDaRECs, 2024: No progress. NDSLIC, 2024: Continued progress, meeting and conducting outreach with the electrical sector, promoting protection, prevention, and resiliency.
SI-2	Rehabilitate aging dams that do not meet current dam safety criteria	Dam Failure	Goal 3, Objective 3.7	High	DWR (Lead)	HHPD, NRCS, BIA, BRIC, HMGP	2028, Long Term	DWR, 2024: 1) Ongoing periodic inspections of high and medium hazard dams provide recommendations for repairs to dam owners. 2) New North Dakota Dam Safety Standards went into effect January 1, 2024.
SI-3	Provide technical assistance to private dam owners to rehabilitate aging dams	Dam Failure	Goal 3, Objective 3.7	High	DWR (Lead)	DWR General Fund (staffing)	2028, Long Term	DWR, 2024: 1) Ongoing periodic inspections of high and medium hazard dams provide recommendations for repairs to dam owners. 2) New North Dakota Dam Safety Standards outline technical requirements and are applicable to all owner types

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SI-4	Upgrade infrastructure to modernize and improve water quality and supply, and to reduce the affects from increased flooding and drought	Drought, Flood	Goal 3, Objective 3.4	High	DWR (Lead), ND Rural Water	EPA, DEQ Clean Water Revolving Fund, DEQ Drinking Water Revolving Fund, BRIC, HMGP, FMA, Climate Pollution Reduction Grant	2028, Long Term		DWR, 2024: Through the State Water Commission and DWR Cost-Share Program, municipal water supply improvements are eligible for up to 60% cost-share assistance, and rural water systems are eligible for up to 75% cost-share assistance. Flood protection projects for population centers are eligible for up to 60% cost-share. DWR's Drought Disaster Livestock Water Supply Assistance Program provides assistance for water supply projects that support livestock impacted during drought declarations and is administered according to N.D.A.C. Art. 89-11. The Commission may provide up to 65 percent cost-share for Drought Disaster Livestock Water Assistance Program projects, but no more than $10,000 per project, and three projects per applicant. DWR continues to operate and maintain the Devils Lake East and West Outlets. With the completion of the Devils Lake West End Capital Improvement Plan in April 2024, priority improvements were identified. ND Rural Water, 2024: ND Rural Water works closely with the Regional, Rural, and Small water systems to ensure all of North Dakota has access to affordable, ample, and quality water. Through a combination of Local, State, and Federal Funding, Rural and Regional Water Systems now serve approximately 310,000 residents through a network of over 41,000 miles of

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								pipe. The systems provide water to 75% of the State's 355 incorporated cities and have over 70,000 connections across all counties. ND Rural Water offers training and onsite assistance to help water systems be prepared for drought and other potential hazards.
SI-5	Construct new or upgrade existing water delivery systems to improve efficiency and conservation (such as breaks caused by ground shifting)	Drought	Goal 3, Objective 3.4	High	DWR (Lead)	ICDBG, DEQ Clean Water Revolving Fund, DEQ Drinking Water Revolving Fund, HMA, Climate Pollution Reduction Grant	2028, Long Term	DWR, 2024: Through the State Water Commission and DWR Cost-Share Program, municipal water supply improvements are eligible for up to 60% cost-share assistance, and rural water systems are eligible for up to 75% cost-share assistance. Flood protection projects for population centers are eligible for up to 60% cost-share.
SI-7	Assist subapplicants with application development of flood proofing projects to protect critical	Flood	Goal 3, Objectives 3.3 and 3.4, Goal 4,	High	NDDES (Lead)	HMGP, BRIC, FMA, STORM, NDDES	2028, Long Term	NDDES, 2024: HM continues to aid applicants with developing project applications and implementing awarded floodproofing projects.

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	facilities, utility infrastructure, government buildings, and residential structures		Objectives 4.1, 4.2, 4.3, and 4.5		General Budget, EMPG			
SI-8	Combined with SI-12: Assist subapplicants with application development of tornado safe room, ~~and~~ shelter projects, and outdoor warning systems	Severe Summer Storms	Goal 3, Objective 3.4 and Goal 4, Objectives 4.1, 4.2, 4.3, and 4.5	High	NDDES (Lead)	HMGP, BRIC, NDDES General Budget, EMPG	2028, Long Term	NDDES, 2024: HM continues to aid applicants with developing project applications and implementing awarded safe room, storm shelter projects, and outdoor warning systems.
SI-9	Convert overhead powerlines to buried underground lines, where appropriate (Note this was previously listed as: *Promote electrical infrastructure mitigation measures)*	Severe Summer Weather, Severe Winter Weather, Space Weather	Goal 3, Objective 3.4	Medium	NDDES (Lead), NDAREC, SEB	HMGP, BRIC, Utility Funding (NDAREC)	2028, Long Term	NDDES, 2024: No update during this reporting period. NDAREC, 2024: No update. SEB, 2024: Conduct inspections of buried underground lines, if customer owned (utilities are exempt).

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SI-11	Improve transportation infrastructure to reduce accidents and prevent mass casualty and hazardous material release incidents	Hazardous Materials, Severe Winter Storms, Transportation Hazards	Goal 3, Objective 3.8	Medium	NDDOT (Lead) ~~NDSLIC~~, NDDES, NDDEQ NDHHS, NDAC, NDDMR, ~~USDHS~~, NDHP	SAFER grant	2028, Long Term	NDDOT, 2024: Implemented several safety projects this year including wrong way detection, four-laning more of US 85, etc. to support the safe transportation of humans and goods. NDHHS, 2024: Ensure plans are regularly updated to reflect current transportation patterns in ND. NDDES, 2024: The Haz Chem Section helps to monitor releases due to traffic accidents by tracking them in the Hazconnect system. NDAC, 2024: No update provided. NDDMR, 2024: Work with oil and gas operators to embrace improvements in methods and technology for the development of the Bakken Petroleum System to reduce the number of semis and other equipment on the road. NDHP, 2024: Ensure response plans are regularly updated to reflect effective responses to hazardous material release incidences, winter storms, and transportation hazards.
SI-13	Construct with permeable paved surfaces to reduce runoff and promote groundwater recharge (also known as water smart landscaping)	Drought	Goal 5, Objective 5.3	Low	NDDOT (Lead), NDPR, NDAWN/NDSCO	Climate Pollution Reduction Grant, BRIC, HMGP	2028, Long Term	NDDOT, 2024: Transportation Engineers are continuously investigating innovative paving strategies. Current strategies include SMA, crack & seal overlays, micro surfacing, and others are all currently being used but have not investigated further permeable pavements. Permeable pavements may not be the best option due to the extreme

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								nature of ND's climate. Permeable pavements may increase water saturation under pavement which may lead frost heaving and pavement/base/subgrade failures. Permeable surfaces may be an option for future parking lots, paths, or landscaping. NDPR, 2024: Sustained action to maintain gravel surfaces and other existing permeable roadways. NDAWN, 2024: Continue to work with local counties/townships to provide temperature and moisture data for graveled roads to better understand the substructure permeability of such roads.
SI-14	Work with communities to implement and enforce building codes when retrofitting buildings and critical facilities to withstand wind and weight, and proper water line depth	Severe Winter Weather, Severe Summer Weather	Goal 3, Objective 3.4	Low	Commerce (Lead)	HMGP, BRIC, CDBG	2028, Long Term	Commerce, 2024: Provided guidance to one jurisdiction on building codes to include retrofitting critical facilities as part of technical support to code-enforcing jurisdictions.
SI-15	Explore and identify options for hastening river channel modification where	Geological Hazards, Flood	Goal 5, Objective 5.4	Low	NDDES (Lead), ~~DWR~~, NDGS	HMGP, BRIC, USACE	2028, Long Term	NDDES, 2024: Promotes the HMA and BRIC grant applications to all emergency management partners interested in applying. ~~DWR, 2024:~~ NDGS, 2024: No activity for this reporting period.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies		Funding Source	Goal Completion, Short or Long Term	Status
	change is imminent in the long-term								
SI-16	Evaluate structural and nonstructural mitigation alternatives for at-risk areas for landslides near waterways	Geological Hazards	Goal 5, Objectives 5.2 and 5.3	Low	NDDES (Lead), ~~DWR~~, NDGS	HMGP, BRIC	2028, Long Term		NDDES, 2024: No progress for this reporting period. ~~DWR, 2024:~~ NDGS, 2024: No activity for this reporting period.
Nature Based Mitigation									
NB-1	Identify areas of cultural significance at risk from geological hazards	Geological Hazards	Goal 2, Objective 2.3	High	SHSND (Lead), BIA, NDIAC	HMGP, BRIC, Tribal Data Development, DOI, BLM, Interpretive Center, University GIS Departments, National Park System	2025, Short Term		SHSND, 2024: Monitoring slumping at Double Ditch Indian Village State Historic Site, worked with Theodore Roosevelt National Park to stabilize cultural resources compromised by road failure due to geological movement. BIA, 2024: No update provided. NDIAC, 2024: No update provided.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
NB-2	Collaborate with partners to restore rivers and streams most vulnerable to drought impacts to increase resiliency for water supply, streamflow, and aquatic habitats	Drought	Goal 5, Objectives 5.1 and 5.2	High	NDGF (lead), DWR, NDDES, USACE	HMGP, BRIC, EPA, USACE SJ, FMPS, 22 (PAS), 205, 1135, GI	2028, Long Term	DWR, 2024: Other than low head dam modification to reduce roller effects that also can sometimes involve downstream rock riffles for aquatic/stream/river connectivity benefits, DWR does not get involved in stream restoration projects. DWR provides cost-share assistance at up to 75% for low head dam roller effect mitigation projects that can include downstream rock riffles for fish passage and stream/river ecosystem connectivity. NDDES, 2024: Promotes the identification of vulnerable environments to drought through mitigation planning. No other progress for this reporting period. NDGF, 2024: NDGF provides technical data on the needs of aquatic species and their habitats. The NDGFD collaborates with the Garrison Dam Conservancy District on the Red River Valley Water Supply project to provide environmental flows into Lake Ashtabula and the Sheyenne River during times of drought. These flows help maintain aquatic habitat as well as providing a water supply to eastern North Dakota. The Department also promotes and assists entities with modifying low head dams to allow fish passage during times of low flow periods. USACE, 2024: USACE Section 1135 and GI authorities provide options for ecosystem restoration; USACE

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								Engineering with Nature provides opportunities to develop and operate a project supporting water resources development, flood risk reduction, ecosystem restoration, etc.
NB-3	Identify potential areas or communities that may be adversely affected by excessive fuel loading and create partnerships to mitigate wildfire fuel loads	Fire (Wildfire)	Goal 3, Objective 3.4; Goal 5, Objective 5.2	High	NDFS (Lead)	HMGP, BRIC, USFA, HMGP-PF	2025, Short Term	NDFS, 2024: NDFS, 2024: The National Wildfire Risk to Communities website has been updated with new data, https://www.fs.usda.gov/managing-land/fire/wildfirerisk. This identifies communities that may be affected. No action on creating new partnerships. The current partnership exists in the pine area of SW ND.
NB-4	Invest in natural buffers and nature-based solutions to improve water quality	Drought	Goal 5, Objectives 5.1, 5.2, and 5.3	Medium	NDDES (Lead), NRCS, NDGF, ~~DWR~~	HMGP, BRIC, EPA	2028, Long Term	NDDES, 2024: Promotes nature-based solutions and water quality projects through mitigation planning efforts and provides education via annual reports. NRCS, 2024: Watershed plan-EIS for North Branch Park River Cart Creek Site 1 is currently out for public comment, which incorporates wetland restoration, wetland enhancement, and constructed wetland for water quality improvements in the watershed with flood damage reduction measures. In addition, many thousands of acres of financial and technical assistance for soil health and grazing improvement practices on private agricultural lands across the state provide water quality benefits.

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								NDGF, 2024: The NDGF promotes NRCS buffer strip planting programs through our Private Lands program. Benefits include soil erosion prevention and wildlife habitat. ~~DWR, 2024:~~
NB-5	Construct infiltration basins as an alternative mean of water storage	Drought	Goal 5, Objective 5.3	Medium	NRCS (Lead), DWR, NDDES, NDGF	HMGP, BRIC, EPA, CDBG	2028, Long Term	NRCS, 2024: None planned for 2024. NDDES, 2024: Technical programmatic experts collaborate with engineering firms and contractors to ensure quality projects which may include infiltration basins or other means of water storage. DWR, 2024: DWR contracted a Managed Aquifer Recharge (MAR) assessment that was completed in early 2024. The purpose was to evaluate the feasibility and use of MAR in North Dakota's glacial drift aquifers to extend and enhance their resiliency. The work completed included a detailed report, which also supports interactive maps that are available via DWR's Map Services. The report establishes criteria for the definition of five separate "Tiers" by which the MAR potential for North Dakota's glacial drift aquifers could be ranked. This will serve as an important step in North Dakota's ability to strategically locate and utilize MAR (through infiltration basins or injection wells) in the future. NDGF, 2024: Promotes wetland restoration as a means of providing important wildlife habitat and

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								water storage. The NDGF will restore wetlands on its own managed lands when possible. The NDGFD annually reviews hundreds of development projects throughout the state encouraging no-net loss of wetlands. We work cooperatively with other permitting agencies to ensure wetlands are mitigated properly
NB-6	Support the development of natural and artificial snow fences and windbreak renovations at the local and tribal levels	Winter Storms	Goal 3, Objective 3.4 and Goal 5, Objectives 5.2 and 5.4	Medium	NDFS (Lead) NDDOT, NDDES	HMGP, BRIC Arbor Day Foundation, Outdoor Heritage cost-share	2027, Long Term	NDFS, 2024: Snow management was taught at the fall NDSCDEA Windbreak Workshop. Funding is available from several sources. 17 windbreak renovations were completed in 2023 with Outdoor Heritage cost-share funding, with another 21 projects in progress. NDDOT, 2024: No progress beyond education for this reporting period. NDDES, 2024: NDDES hosted "NDFS Forest Stewardship Manager" to inform emergency managers and plan developers on available funds for windbreak renovations at the 4/8/2024 Plan Developers meeting series.
NB-7	Construct and incorporate raingardens or vegetated swales to reduce storm water runoff	Severe Summer Hazards	Goal 5, Objective 5.3	Low	NRCS (Lead), NDGF	HMGP, BRIC	2028, Long Term	NRCS, 2024: We are working on standard drawings, design sheets, and training for our field staff across the state. NDGF, 2024: No action at this time.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies		Funding Source	Goal Completion, Short or Long Term	Status
NB-8	Invest in community projects including planting and utilizing tree canopies to reduce urban heat-island effects	Severe Summer Hazards	Goal 5, Objective 5.3	Low	NRCS (Lead), NDFS, ~~NDGF~~	HMGP, BRIC, Arbor Day Foundation	2028, Long Term		NRCS, 2024: No interested parties have approached us for financial or technical assistance. NDFS, 2024: NDFS Community Forestry program provided $260,164 in USDA Forest Service State, private, and tribal forestry funds to 28 communities to complete community tree care and planting projects.
Public Education, Technical Assistance, and Partnerships									
PTP-1	Create media literacy kits to educate the public about hazards and reduce the spread of misinformation	Adversarial Threats	Goal 2, Objectives 2.3 and 2.5	High	ND State Library System (Lead), NDDES, SLIC, NDSU Extension	General Fund, EMPG	2024, Short Term		ND State Library System, 2024: Media literacy specialist and mitigation planning specialist will initiate a strategy in 2025. NDDES, 2024: Collaborating with ND State Library to initiate and develop this initiative. SLIC, 2024: Will leverage media, information, etc. from federal sources and will disseminate to the public, key stake holders, and policy makers. NDSU Extension, 2024: Create social media content related to disasters and disaster mitigation.
PTP-2	COMPLETED: Promote climate literacy kits, amongst other tailored youth and adult hazard information, available via partnership with the ND State Library	Natural Hazards with Climate Change Focus	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	High	ND State Library (Lead), NDDES	American Library Association, EMPG	2024, Short Term **Complete**		ND State Library, 2024: Completed May 2024 NDDES, 2024: Funded and developed climate literacy kits which were completed May of 2024, and are currently being distributed to the public and schools.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies		Funding Source	Goal Completion, Short or Long Term	Status
PTP-3	Develop and conduct mitigation funding trainings to increase (1) awareness of programs and (2) capabilities of local and tribal communities to apply	All Hazards	Goal 2, Objective 2.1	High	NDDES (Lead), NDEMA	HMGP, BRIC, FMA	2026, Short Term	NDDES, 2024: Promoted the NDFS Windbreak renovation project at the April Plan Developers meeting. NDEMA, 2024: Supporting NDDES's planning team by promoting the Plan Developers series meeting to the membership.	
PTP-4	Disseminate state-developed risk information products to property homeowners, real estate agents, developers, tribes, and public officials so that individuals, tribes, and communities can make decisions about geological hazards	Geological Hazards	Goal 1, Objective 1.2, Goal 2, Objective 2.3	High	NDDES (Lead), NDGS, NDEMA, ND REALTORS	HMGP, BRIC	2025, Short Term	NDDES, 2024: Provides geologic risk information products to plan developers and emergency managers. NDGS, 2024: GeoNews Hazard articles published. NDEMA, 2024: Disseminates information to the membership on a request basis. ND Realtors, 2024: ND Realtors educates realtors and the public regarding hazards homeowners could face, including geological hazards.	
PTP-5	Train NDDES Staff and Local and Tribal Mitigation Planners on use of Equity Mapping Tools and develop a training strategy for promotion	All Hazards	Goal 1, Objective 1.1; Goal 2, Objective 2.3	High	NDDES (lead), NDEMA, NDIAC	EMPG	2024, Short TerNDm	NDDES, 2024: NDDES Planning and Recovery Staff sought direct technical assistance from FEMA R8 to conduct an Equity Mapping Train the Trainer course. NDDES employees and trainers will then provide audiences with training on equity mapping tools.	

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								NDEMA, 2024: Promoted this initiative by providing NDDES Planners time to present on Equity Mapping tools at NDEMC 2024. NDIAC, 2024: No update provided.
PTP-6	Form coalition or workgroup of public/private sector utility experts and stakeholders in electricity generation/distribution industry to share resources and mitigation ideas	Space Weather, Severe Winter Weather, Severe Summer Weather, Cyberattack	Goal 3, Objective 3.6	High	NDDES (Lead), NWS, NDIAC, NDDES, NDGS, NDEMA, NDSEB	Commerce, NERC	2026, Short Term	NDDES, 2024: Have not initiated this action beyond maintaining existing relationships. NWS, 2024: No progress. NDIAC, 2024: No progress. NDGS, 2024: No progress. NDEMA, 2024: No progress. SEB, 2024: No progress.
PTP-7	Form coalition or workgroup of public/private sector utility experts and stakeholders in the pipeline industry to share resources and mitigation ideas	Space Weather, Severe Winter Weather, Severe	Goal 3, Objective 3.6	High	NDDES (Lead), NWS, NDIAC, NDDES, NDGS, NDEMA, NDSU	PHMSA	2026, Short Term	NDDES, 2024: Have not initiated this action beyond maintaining existing relationships. NWS, 2024: No progress. NDIAC, 2024: No progress. NDGS, 2024: No progress. NDEMA, 2024: No progress.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
		Summer Weather, Cyberattack			Extension			NDSU Extension, 2024: Hosts quarterly meetings with oil and gas industry stakeholders regarding reclamation.
PTP-8	Identify eligible dams for HHPD grant and apply to fund rehabilitation; and work with emergency managers and dam owners to pursue funding	Dam Failure	Goal 3 Objective 3.7	High	DWR (Lead), NDDES	HHPD	2028, Long Term	DWR, 2024: Dams meeting basic eligibility criteria have been identified. Interested owners of eligible dams with project(s) ready to pursue funding are needed. NDDES, 2024: Encourages and provides technical assistance in completing HHPD requirements in mitigation planning to gain access to funds.
PTP-9	Conduct community flood insurance and flood hazard mitigation forums regarding available programs, resources, and funding sources	Flood	Goal 2, Objective 2.4, Goal 3, Objective 3.2	High	NDDES (Lead), DWR, Insurance Department	HMGP, BRIC, FMA	2024, Short Term	NDDES, 2024: Collaborating with State NFIP Coordinator to promote and host flood hazard mitigation forums. DWR, 2024: Hosted two in-person and one virtual insurance agent trainings re: Flood Insurance. ND Insurance Department, 2024: Identified areas of improvement in state-managed NFIP for counties and townships. Working with DWR and Legislative Council to bring forward legislation to correct issues before promoting NFIP Statewide.
PTP-10	Establish a clear public drought monitoring	Drought	Goal 2, Objective	High	NDAWN/NDS	USDA	2028, Long Term	NDAWN/NDSU State Climatologist, 2024: Use of data from the North Dakota Agricultural Weather Network

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies		Funding Source	Goal Completion, Short or Long Term	Status
	system that is easy to understand and emphasizes an ability to give early warnings via ND Mesonet System (NDAWN)		s 2.1, 2.2, 2.4, and 2.5		CO (lead), NWS, NDDES				(NDAWN), including the precipitation and soil moisture data is used to evaluate current drought conditions. Additionally, staff monitor Condition Monitoring Observer Reports (CMOR) and talk directly to stakeholders to verify conditions across the state on a continuous basis. NWS, 2024: NWS collaborates with the State Climatologist's Office on drought recommendations to the USDM as well provide supplemental data and perspectives on the status of drought across North Dakota. NDDES, 2024: Collaborates with drought and warning stakeholders to promote drought ranking awareness. Includes the drought monitor in Daily Situation briefings from ND Watch Center.
PTP-11	Identify and/or develop and conduct a Whole Community education program that teaches the basics and benefits of gardening, pollinator gardens, native flowers and plants, and home-grown food systems	Drought	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5; Goal 5, Objectives 5.1, 5.2, 5.3, 5.4	High	NDSU Extension NDGF (Co-Leads), NDDES	DPI, NDSU Extension	2024, Short Term		NDSU Extension, 2024: Developed educational resources, training and presented to the public on the basics and benefits of gardening, pollinator gardens, native flowers and plants, and home-grown food systems. NDGF, 2024: Provides funding for downtown pollinator plantings to promote community education on pollinators. Provides 5-10 schools a year with pollinator plant grow kits, curriculum, and ~100 native plants to grow on school property. Working on

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								a program to supply free pollinator seed to homeowners for urban gardens (hoping to launch in 2025). Has numerous resources online and utilizes other outreach platforms (webcasts, podcasts, social media, etc.) to educate public about the importance/value of native plants and pollinators. NDDES, 2024: Promoted the Urban Pollinator Garden program administered by the NDGF in the 2024 annual report.
PTP-12	Host outreach activities to encourage homeowners to purchase insurance (including flood insurance)	Flood, Fire (Wildfire and Urban Fire), Severe Summer Storms	Goal 2, Objectives 2.1, 2.2, 2.5, and 2.5 Goal 3. Objective 3.2	High	DWR (Lead), ND Insurance Department	CAP-SSSE, RiskMAP, DWR General Funds, Insurance Providers	2024, Short Term	DWR, 2024: We hosted two in-person and one virtual insurance agent trainings re: Flood Insurance. ND Insurance Department, 2024: Held various media interviews discussing flood insurance.
PTP-13	Increase participation in the NOAA's National Weather Service's StormReady Program	Severe Summer Storms	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	High	NWS (Lead) NDDES, NDEMA, NDAIC, City,	NWS Budget (staff time and signage)	2024, Short Term	NWS, 2024: All counties in North Dakota are now StormReady. This includes 53 counties, 43 communities, 2 Tribal Nations, and 4 universities. NDDES, 2024: Promote NWS StormReady participation by increasing climate variability awareness in mitigation planning and promotes participation in the StormReady program.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
					County, and Tribal Emergency Management Partners			NDEMA, 2024: Supported NWS initiatives by providing time to present at 2024 NDEMC. NDAIC, 2024: No update provided.
PTP-14	Provide physical and cyber security measures grant funding to schools and other public entities	Adversarial Threats	Goal 4, Objectives 4.1, 4.5	Medium	NDDES (Lead), NDIT	Homeland Security Grant, State and Local Cyber Security Grant	2024, Short Term	NDDES, 2024: Provided 40 cyber security measures grants in January 2024 to schools and other public entities. NDIT, 2024: Host tabletop exercises for K12 schools and political subdivisions.
PTP-15	Create and promote public Air Quality notification and announcement capabilities and system	Hazardous Materials, Wildfire	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Medium	NDDEQ (Lead)	EPA	2026, Short Term	NDDEQ, 2024: Air quality measurements are taken at key points throughout the state and reported in real time to the AirNow system. This gives the public 24/7 access to air quality information, which is especially useful during wildfire events. In addition, press releases are used to inform the public of air quality issues when they arise.

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PTP-16	Develop county- and state- and tribal-based landslide information tracking system of active and recent landslides to assist with land and water development decision-making	Geological Hazards	Goal 1, Objective 1.2, Goal 2, Objective 2.3	Medium	NDGS (Lead), NDDES, NDIAC, ~~NDEMA~~	HMGP, BRIC, NDGS Budget	2026, Short Term	NDDES, 2024: Promotes awareness and planning for geologic events through mitigation planning. No progress toward expanding this effort for this reporting period. NDGS, 2024: Phase III (Active Slide Identification) LS Mapping continues in Western North Dakota ~~NDEMA, 2024:~~ NDIAC, 2024: No update provided.
PTP-17	Conduct outreach with elected officials, neighborhood groups, and homeowner associations about the benefits of maintaining defensible spaces	Wildfire	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Medium	NDFS (Lead), BIA	USFA	2026, Short Term	NDFS, 2024: Active social media fire prevention campaigns mention defensible space. BIA, 2024: No update provided.
PTP-18	Support educational efforts related to culturally important native plants (tribal/medicinal), food, and animals that are impacted by drought	Drought	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Medium	NDGF and NDSU Extension (Co-Leads), NDDES, NDIAC, NDUS	NDSU Extension	2026, Short Term	NDGF, 2024: No current efforts NDSU Extension, 2024: Talked about managing grasslands to increase drought resilience at producers meetings; wrote 2 press articles on the topic. Will provide additional education if drought risk increases. NDDES, 2024: Received technical assistance and information from Standing Rock Sioux Tribal members to understand the importance of culturally significant plants. NDIAC, 2024: No update provided.

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									NDUS, 2024: No update provided.
PTP-19	Conduct education and outreach on available programs and financial support to implement sustainable grazing and agricultural conservation practices	Drought	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Medium	NDSU Extension (Lead), NDDA	NDSU Extension, USDA FSA, NRCS, ND Stockmen's Association	2024, Short Term		NDSU Extension, 2024: Presented on programs and financial support at producer meetings. NDDA, 2024: Continued with soil health cover crop program by providing producers cost-share opportunities for crop rotations. Commissioner Goehring provides information to media during drought about integrating conversation practices.
PTP-20	Provide education on how producers and the public can conduct water testing to ensure safe water quality conditions, especially the testing of nitrates in water supply during deteriorating drought environmental conditions	Drought	Goal 2, Objective 2.1	Medium	NDSU Extension (Lead), NDDA, NDDEQ	USDA, Water Utilities	2024, Short Term		NDSU Extension, 2024: Extension agents screened livestock water sources, wrote popular press articles, presented at rancher meetings and created content for social media. Will increase outreach if drought intensifies. NDDA, 2024: Working on drought resource updates and providing media interviews regarding drought or when water quality may be of concern. NDDEQ, 2024: NDDEQ municipal facilities provides training to public drinking water systems on an annual basis on the proper testing procedures for nitrates/nitrites. All public drinking water systems are required to test annually for nitrate/nitrites.
PTP-21	Conduct outreach to increase NFIP participation, advance awareness/use of	Flood	Goal 2, Objectives 2.1, 2.3, 2.4 and	Medium	DWR (Lead) NDDES, ND	HMGP, BRIC, FMA	2026, Short Term		DWR, 2024: We've hosted multiple county and township meetings to increase NFIP participation and awareness. We've also presented to the Township

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
	RiskMAP products, and increase CRS scores		2.5, Goal 3, Objectives 3.2 and 3.3, Goal 4 Objectives 4.1, 4.2, 4.3, and 4.5		Insurance Department			Officers Association and the States Attorney's Association on county/township zoning. NDDES, 2024: Promote NFIP participation through mitigation plan updates and the approval process. ND Insurance Department, 2024: Identified areas of improvement in state managed NFIP for counties and townships. Working with DWR and Legislative Council to bring forward legislation to correct issues before promoting NFIP Statewide.
PTP-22	Conduct outreach with agricultural producers ~~the livestock industry~~ to understand insurance options	Drought	Goal 2, Objective 2.1	Low	USDA RMA (Lead), FSA, NDSU Extension, NDDA ~~(Lead),~~ ND Insurance Department	ND Stockmen's Association, FSA, private insurance	2027, Long Term	RMA, 2024: Provides insurance options for approved crops and inform crop agents on a bi-annual basis regarding insurance updates. FSA, 2024: Promotes USDA RMA products along with FSA provided indemnity or emergency relief programs. NDSU Extension, 2024: Presented information on private or public insurance options at producer meetings. NDDA, 2024: Will collaborate with stakeholders as program options are reviewed. ND Insurance Department, 2024: No progress at this time.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
PTP-23	Promote storm safety information during Severe Weather Awareness Weeks	Severe Summer Weather, Severe Winter Weather	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Low	NWS (Lead), NDDES, NDUS, ARC, AARP, MAFB, NDVOAD	NOAA	2024, Short Term	NWS, 2024: North Dakota Severe Winter Weather Awareness Week was from October 30 through November 3, 2023. North Dakota Severe Summer Weather Awareness Week was April 22 through April 26, 2024. NDDES, 2024: Posted NWS themed content every day through the week of April 22-26. Hosted a children's coloring contest with over 260 participants. NDUS, 2024: No update provided. ARC, 2024: ARC Prepared 83 youth ages 4-6 through Prepare with Pedro program; Prepared 700 third graders through Pillowcase project; prepared about 112 adults through Be Red Cross Ready program (hazards: tornado, winter weather, severe storms, wild fire, general preparedness, home fire). Addressed additional hazards such as severe summer storms during 250 home fire safety visits). AARP, 2024: No update provided. MAFB, 2024: Targeted the Department of Defense and civilian-based populace during National Preparedness Month.
PTP-24	Launch a public outreach program targeting both businesses and citizens related to advanced	Drought	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Low	DWR (Lead)	USDA, NRCS, Water Utilities	2026, Short Term	DWR, 2024: DWR continues to provide educational materials and programing related to water conservation through its Water Education Today (WET) program.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
	indoor/outdoor water conservation practices							
PTP-25	Promote public awareness and use of NDDOT resources, which includes travel maps, cameras, and an opt-in service that sends condition updates	Severe Winter Weather, Transportation Hazards	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Low	NDDOT (Lead), NDSR, NDDES, MAFB, AARP, NDSU Extension, ~~NDVOAD~~	SAFER Funds	2026, Short Term	NDDOT, 2024: Continued to market NDROADS which has the option of sending updates via Govdelivery. NDDES, 2024: Promote the use of NDRoads to stakeholders during potentially severe summer and winter weather. NDSR, 2024: Collaborates with NDDOT to make minor updates road maps outside of normal operating hours. MAFB, 2024: Disseminate information through various base activities to include Responders Days, Populace Show and Tells, Ward County Mass Warning Notification and Links, and various emergency links, such as NDDOT's links. AARP, 2024: No update provided. NDSU Extension, 2024: Share information during severe weather and include links on disaster webpage. ~~NDVOAD, 2024:~~
PTP-26	Develop web-based Disaster Recovery Planning resources that promotes community resiliency	All Hazards	Goal 1, Objective 1.1	Low	NDDES (Lead)	HMGP, BRIC, EMGP. AAR	2024, Short Term	NDDES, 2024: While some existing guides have been updated and new guides have been created, the final product is not yet complete.

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PTP-27	Promote and educate local jurisdictions on methods to address how population changes and economic considerations, and future development impact exposure to natural hazards.	All Hazards	Goal 2, Objectives 2.1, 2.2, 2.3, 2.4, 2.5	Medium	NDDES (Lead)	BRIC, HMGP	2029, Long Term	NDDES, 2024: Through state, local, and tribal mitigation plan updates new development, demographic changes, and future development considerations are outlined and addressed.	
PTP-28	Develop strategies and tools that assist local/tribal mitigation programs that specifically address disparities in underserved communities and challenges resulting from the impacts of climate variability.	All Hazards	Goal 2, Objectives 2.1, 2.2, 2.3, 2.4, 2.5	Medium	NDDES (Lead), NDAWN/NDSCO	BRIC, HMGP	2029, Long Term	NDDES, 2024: Planners work with local and tribal mitigation programs to identify underserved populations by using GIS products and local knowledge. Outreach to these communities addresses changing threats and hazards including climate variability and potential climate change. NDSCO, 2024: Provided educational talks on weather/climate variability in the northern plains.	
Other Mission Areas									
OM-1	Maintain multi-agency response to human and animal disease threats	Infectious Disease	Goal 3, Objective 3.4	High	ND Dept of Ag (Lead), NDSU	USDA, CDC	2024, Short Term	NDDA, 2024: Participates and shares information at Ag Disaster monthly meetings. NDSU Extension, 2024: Facilitates bi-weekly Ag Disaster Meetings; assisted with avian influenza and anthrax response; train county-based personnel to	

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
					Extension, NDDES, NDDEQ, NDHHS, NDDOT, NDG&F			respond to animal disease outbreak or mass livestock mortality (1 training in 2024 and 1 in 2025). NDDES, 2024: Participates and shares information at the Ag Disaster monthly meetings. In the process of nominating and analyzing the ag sector to review a consequence analysis to assign a dollar value to support recovery and response efforts. NDDEQ, 2024: The NDDEQ Solid Waste Program has an established policy for handling emergency disposal of dead or diseased livestock. The policy is outlined in *Guideline 14: Emergency Waste Disposal Variance Notification: Dead or Diseased Livestock* NDHHS, 2024: Expanded attendance at the Ag Disaster bi-weekly meetings to obtain and maintain situational awareness. NDDOT, 2024: Assisted NDDA with Avian Influenza efforts as requested. NDGF, 2024: Maintain system for public to report sick and dead wildlife. Follow up with necropsy and testing when warranted. Communicate findings and implications to relevant stakeholders and partners.
OM-2	Create a winter weather information dashboard for a	Severe Winter Weather	Goal 2, Objective 2.4	High	NDDES (Lead)	HMGP, NOAA, EMPG	2024, Short Term	NDDES, 2024: Utilizes existing Winter Storms Declaration dashboard. Further progress on this project has not yet been initiated.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
	centralized location for decision making							
OM-3	Establish and maintain a robust medical cache with ease of access to resources such as personal protective equipment to mitigate exposure to infectious and harmful agents	Infectious Disease	Goal 3, Objective 3.4	High	NDHHS (Lead), ND Department of Ag	Hospital and Clinic Funds	2024, Short Term	NDHHS, 2024: Maintaining and expanding the variety of medical and durable equipment stored on site. NDDA, 2024: Have requested assets to refill response assets and had conversations about existing or new assets.
OM-4	Build capacity (rosters, training, equipment) at the local and tribal fire department levels to promote self-sufficiency and reliable Mutual Aid Responses when needed	Wildfire and Urban Fire	Goal 1, Objective 1.3, Goal 2, Objective 2.3, Goal 4 Objectives 4.2 and 4.5	High	NDFS (Lead), BIA,	USFA	2026, Short Term	NDFS, 2024: Hired a Wildland Fire Training Technician. Supported NDFA Fire School providing training for over 1000 firefighters. Coordinated or hosted wildland fire courses for 216 firefighters from 18 fire departments. Provided NWCG training materials, including student workbooks and instructor guides. Provided grants to RFDs through the Cooperative Fire Protection Assistance grant program, funding applications from 34 RFDs totaling $335,204. Provided and made repairs to 2 type 6 engines through the federal property program. BIA, 2024: No update provided.
OM-5	Build capacity in small communities that lack snow removal capabilities by	Severe Winter Storms	Goal 1, Objective 1.3, Goal 2,	High	NDDOT (Lead)	CDBG	2028, Long Term	NDDOT, 2024: Did outreach and training on snow removal with the Spirit Lake Nation due to an equipment building fire.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
	increasing equipment inventories, regionalizing snow removal routes and resource sharing, and identifying additional funding to further boost self sufficiency		Objective 2.3, Goal 4 Objectives 4.2 and 4.5					
OM-6	Continue to identify Traffic Incident Management (TIM) opportunities and training	Transportation Hazards	Goal 3, Objective 3.8	High	NDDOT (Lead)	FHWA	2024, Short Term	NDDOT, 2024: Continues to collaborate with the FHWA and NDHP on TIMS efforts. These efforts include incident response and traffic incident management training, quick clearance, and educating on the Move Over law.
OM-7	Improve summary reporting ability from HazConnect database for local users and improved planning purposes	Hazardous Materials	Goal 3, Objective 3.8	High	NDDES (Lead), NDDEQ	EPA	2025, Short Term	NDDES, 2024: Haz Chem Section has provided the local fire departments and emergency managers with training, licenses, and continued support to improve the understanding and usage of the system. With advanced reporting within the system anything can be searched for and we are able to assist all users with any issues. We achieve this by participating in LEPC meetings, regional EM meetings, and SERC meetings.
OM-8	Establish and promote Cyber Security best practice guidelines via Defend.Nd.gov	Cyber Attack	Goal 2, Objective 2.1	High	NDDES (Lead), NDIT, NDNG	NDIT Budget, State and Local	2024, Short Term	NDDES, 2024: Promotes cyber security best practices by providing insights into cyberattack profiles in mitigation plans. NDIT, 2024: No updates for this reporting period.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies		Funding Source	Goal Completion, Short or Long Term	Status
						Cyber Security Grant			NDNG, 2024: Regularly education our users on DoD cyber security best practices to include individual training (annually) and willingness to participate in any cyber related tabletop exercises with state partners.
OM-9	Champion information security and cybersecurity to encourage citizens to increase awareness and knowledge of the issue	Cyber Attack	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	High	NDIT (Lead), NDDES, NDNG	NDIT Budget	2024, Short Term		NDIT, 2024: Plans are in place to promote cybersecurity awareness during Cyber Awareness month (Oct). NDDES, 2024: Provides information during outreach events on safe cyber practices. NDNG, 2024: No progress made.
OM-10	Promote programs that draw awareness to the recognition and prevention of drug use, specifically fentanyl overdose and drug related deaths	Criminal Attack	Goal 2, Objective 2.1	High	NDDES (Lead), BCI, NDSLIC, NDHHS	DEA, Partnership for a Drug-Free America	2024, Short Term		NDDES, 2024: Promotes awareness of illegal drug activity in planning by reviewing criminal attack threat profiles. Collaborates with NDSLIC and other stakeholders to promote awareness and recognition of the issue. BCI, 2024: Participates in the HIDTA ORS program which creates partnerships between law enforcement and public health to reduce overdose deaths. NDSLIC, 2024: Can link our webpage to local, state, and federal efforts/programs. Local public health and first responder groups. NDHHS, 2024:

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								• We have been collected drug overdose information through the ND Violent Death Reporting Program since 2019 • We have a drafted a drug overdose dashboard that will get posted sometime this summer/fall • There is a report that's been going out to state leadership for 3 years. It provides trend information and preliminary data
OM-11	Build and enhance collaboration with Canadian and Tribal contacts to facilitate communication, surveillance, and tracking of infectious diseases in order to better inform mitigation measures	Infectious Diseases	Goal 1, Objective 1.2	Medium	NDHHS, NDDA, (Co-Leads)	CDC, USDA, Commerce	2028, Long Term	NDHHS, 2024: This work is still under development. Work is currently being done to establish a data use agreement with Tribal Nations also looking to reestablish regular meetings with our Canadian counterparts NDDA, 2024: Worked with Canadian and Tribal contacts regarding swine fever.
OM-12	Evaluate available resources and address resource gaps for healthcare systems and veterinarian services to develop plans and interagency partnerships to share	Infectious Diseases	Goal 1, Objective 1.3 and Goal 2, Objective 2.3	Medium	NDHHS (Lead), NDDA	USDA	2026, Short Term	NDHHS, 2024: Continues to develop a medical cache and maintain a medical reserve corps and other volunteer staff. NDDA, 2024: Supports animal operations with a zoonotic element and collaborates with healthcare professionals to ensure human safety.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
	resources necessary for prevention and mitigation measures							
OM-13	Conduct, as requested, at least two critical infrastructure assessments (physical, threat, risk, and or consequence). As well as, provide at least two presentations (threat, risk, and or consequence), as requested, to critical infrastructure partners annually.	Criminal Attack	Goal 3, Objective 3.4	Medium	NDDES (Lead), BCI, NDSLIC, Local EM's, Private Industry, NGO's, CISA	General Fund, EMPG	2024, Short Term	NDDES, 2024: Promotes critical infrastructure (CI) assessments through the NDSLIC by informing emergency managers of the available program. BCI, 2024: Collaborates with NDSLIC to conduct CI assessments and presentations to CI partners. NDSLIC, 2024: Completed 13 physical security assessments and 1 presentation since 01 FEB 2024. CISA, 2024: Completed 2 active shooter trainings (this information is also talked about during assessment): One infraguard general threat and capability assessment. Five threat briefs and two were to critical infrastructure owner and operators. CISA also hosts a quarterly critical infrastructure coordination calls with the energy sector.
OM-14	Contribute to ~~Facilitate~~ the discussion and development of a behavioral analysis task force at the local and tribal levels that is supported by state agencies	Nation-State, Terrorists Attacks	Goal 1, Objective 1.3	Medium	NDSLIC (Lead), ~~NDDES, Potential FBI, County/City/Tribal First~~	DoJ, COPS, ATF	2026, Short Term	NDSLIC, 2024: In progress; attending meetings and briefings in Cass County where local-state-federal health and law enforcement are strategizing on solutions to help individuals and mitigate potential downrange problems. ~~First Responder Groups, 2024:~~ NDIAC, 2024: No update provided.

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					~~Responder Groups,~~ NDIAC			
OM-15	Invest in Intelligent Transportation Systems for Traffic Incident Mitigation which includes cameras, dynamic message systems, fixed anti-icing spray technology, intersection collision warning systems, curve warning systems, and wrong way detection systems	Transportation Hazards	Goal 3, Objective 3.8	Medium	NDDOT (Lead), FHWA	FHWA-PROTECT	2028, Long Term	NDDOT, 2024: NDDOT received a Grant to install an over-height detection system on I-29 and US-2 to monitor and provide enforcement of over-height loads. NDDOT is in the process of implementing over-height detection on I-29 at the Mooreton weigh scale which will provide data on over-height loads to prevent overhead bridge strikes. FHWA, 2024: Collaborated with NDDOT to support operations by providing technical and financial support.
OM-16	Support development of local and tribal drought contingency plans and studies with rural and regional water suppliers	Drought	Goal 1, Objective 1.1	Medium	DWR (lead), NDDA ~~(Lead),~~ NDDES, NDSU Extension	USBOR WaterSMART, BRIC, HMGP	2028, Long Term	DWR, 2024: DWR can provide up to 75% cost-share for feasibility studies and pre-construction planning/engineering/design for water supply projects that improve drought resiliency within reservations. This is a relatively new option for Tribal Nations. With the passage of HB 1385 during the 2023 Legislative Session, the State Water Commission

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								is now able to enter into cost-share agreements directly with Tribal Nations. NDDA, 2024: Available to provide technical assistance or feedback for contingency planning efforts. NDDES, 2024: Addresses drought in mitigation planning while encouraging integrated planning efforts throughout local and tribal jurisdictions. NDSU Extension, 2024: Available to provide technical assistance or feedback for contingency planning efforts.
OM-17	Procure and install secure electronic systems	All Hazards	Goal 3, Objective 3.6	Medium	NDIT (Lead) NDDES, NDSLIC	NDIT Funding Derived from State Agency Budgets	2028, Long Term	NDSLIC, 2024: The NDSLIC is a technology end user, we don't procure or install systems. This falls directly into NDITs lane. NDDES, 2024: Collaborates with NDIT to follow standard operating procedures and technology updates as they arise. NDIT, 2024: NDIT employs several measures to ensure electronic systems are secure including a zero-trust architecture and third-party monitoring systems. In addition, NDIT's Security team has developed strong response plans, proactively monitors network traffic and threat landscape, conducts third-party risk assessments on vendors who host/process State data, and provides awareness and education to ND citizens and State employees.

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OM-18	Educate and support critical infrastructure (CI) ~~the Whole Community~~ on ways to mitigate cyber threats affecting personal, private, and State security and other sensitive information	Cyberattack	Goal 1, Objective 1.3, Goal 2, Objectives 2.1, 2.2, 2.3, 2.4, and 2.5, Goal 4 Objectives 4.3 and 4.5	Medium	NDSLIC (Lead), NDNG, NDIT, CISA	NDIT Budget, Homeland Security Grant, NDNG Budget	2024, Short Term	NDIT, 2024: • Host tabletop exercises to help agencies, PSDs, and K12 prepare for cyber events. • Continue to host and expand CyberMadness for ND high schools and middle schools. • Sponsor JCSOC, a Joint Cyber Security Operations Center with multiple States to share information • Cyber Public Awareness Campaigns: includes public speaking, conferences and events • Members of the Cyber Intelligence Network, Election-ISAC, MS-ISAC and many others. • Joint Security Operations Command • National Cyber Security Awareness Month NDSLIC, 2024: NDIT covers "state" security, K12 and higher ed cover their areas with NDIT support, ND Health and Human Services cover down on medical facilities, etc. In progress with education and support efforts for CI. NDNG, 2024: Maintain contact with state agencies and be prepared to support any validated efforts where NDNG assets (equipment, personnel, certification, expertise) are needed, requested, and approved. CISA, 2024: Conducted Cyber resilience assessments with Northern Cass School district, Cass County, City

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								of Fargo. Also conducted cybersecurity tabletop exercises for the City of West Fargo, and for public safety answering points (PSAPs) located in West Fargo, Cass County, and surrounding jurisdictions in the ND Red River Valley.
OM-19	Enact loss control measures to increase safety and health of workers, first responders, and New Americans	All Hazards	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Medium	NDHHS and WSI (Co-Leads), Job Service North Dakota, NDDHS, OMB-RMD, NDDOT	WSI Loss Prevention Funds, OSHA, NDDMR	2024, Short Term	NDHHS, 2024: Work with local law enforcement, adult learning centers, and ethnic based community organizations to provide health and safety information to New Americans WSI, 2024: Launched and implemented the Get Home Safe initiative which aims to adopt a culture of safety in North Dakota and create the safest state to work through social media. WSI also launched the Serve and Protect reimbursement program which helps offset costs of routine medical exams for paid full-time firefighters and law enforcement officers. Programs continue to promote and provide loss control services. Job Service, 2024: No update provided. OMB-RMD, 2024: Provide loss control guidance to state agencies as the need arises. In an effort to reward proactive loss control practices by state entities, the Risk Management Division has created a contribution discount program that can result in a savings in the entity's required contribution to the Risk Management Fund of up to 15%. RMD is

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
								promoting the use of a document created for agencies to use when working contracts, "Guidelines to Managing Contractual Risk". NDDOT, 2024: No progress at this time.
OM-20	Promote vaccination ~~and remove barriers (such as transportation access) for the at-risk population~~ to induce active immunity to a disease and develop herd immunity or slow disease progression	Infectious Disease	Goal 2, Objectives 2.1, 2.2, 2.4, and 2.5	Medium	NDHHS and NDDA (Co-Leads), USAPHIS, NDSU Extension, North Dakota Stockmen's Association, NDG&F	NDHHS Budget and NDHHS Children's Vaccination Program Funds	2024, Short Term	NDHHS, 2024: NDHHS continues to conduct activities to increase immunization rates, including reminder/recall, education of healthcare providers and the public, immunization promotional campaign, and providing funding to key stakeholders (i.e., local public health, coalitions, health systems, universities). NDDA, 2024: Have promoted and continue to promote vaccinations when effective for animal disease control to stop or prevent further infection. USAAPHIS, 2024: No update provided. NDSU Extension, 2024: Have promoted and continue to promote vaccinations when effective for animal disease control to stop or prevent further infection. ND Stockmen's Association: No update provided. NDGF: No action at this time.
OM-21	Promote training through the Center for Domestic Preparedness to include mobile field	Civil Disturbance	Goal 2, Objective 2.7	Low	NDDES (Lead), ~~NDIT~~, NDNG	Center for Domestic Preparedness,	2025, Short Term	NDDES, 2024: Promote training opportunities as interest arises and share resources to encourage law enforcement partners to pursue additional trainings. ~~NDIT, 2024: N/A~~

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
	force and command, and protester devices trainings offered at local jurisdictions annually				Participating Agency Budgets			NDNG, 2024: Identified unit, trained personnel, and monitor equipment of National Guard Response Force to be activated through directive by DES upon receipt of RFA adhering to strict training objectives and measures.
OM-22	Educate homeowners on the benefits of climate smart lawns with drought tolerant native vegetation	Drought	Goal 5, Objectives 5.1, 5.2, 5.3, and 5.4	Low	NDDES, DWR (Co-Leads)	NDSU Extension	2026, Short Term	NDDES, 2024: Promote the urban pollinator program and nature-based mitigation through the 2024 annual report. DWR, 2024: DWR provides educational materials and programming related to climate resilience through its Water Education Today (WET) program. The primary resource for this effort is the Climate, Water and Resilience Guide, which helps educators teach middle and high school students about climate and climate change using interactive, objective, science-based activities.
OM-23	Provide speed limit education and information for bulk transporters	Hazardous Materials	Goal 3, Objective 3.8	Low	NDDOT (Lead)	DOT	2025, Short Term	NDDOT, 2024: No action at this time.
OM-24	Assist the private business sector and local and tribal jurisdictions with Continuity of Operations (COOP)	All Hazards	Goal 1, Objective 1.1	Low	NDDES (Lead), NDSLIC, Department of Comme	North Dakota Community Foundation, Local	2028, Long Term	NDDES, 2024: Continued collaboration with local and tribal jurisdictions to educate on the importance of COOP planning and technical assistance as requested. NDSLIC, 2024: Continued progress, meeting and conducting outreach with the private sector and local

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
	planning in preparation of adversarial threats or natural hazards				rce, North Dakota Community Foundation	Community Foundations, EMPG		and tribal jurisdictions, promoting protection, prevention and resiliency. Commerce, 2024: Collaborate with communities on resilience in all their actions and planning efforts. Commerce also works with other state agencies to understand the concerns for long term resilience. Additionally, Commerce will be working with communities and residents on energy efficiency and that will require the expansion of partnerships to include a variety of private, public, and non-profit groups. North Dakota Community Foundation, 2024: No update provided.
OM-25	Maintain tree trimming along power lines to prevent power outages	Severe Winter Weather, Severe Summer Weather, Fire	Goal 5, Objective 5.2 and 5.3	Low	NDAREC Members	Utility Funding (NDREA)	2024, Short Term	NDAREC, 2024: No update at this time.

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
OM-26	Provide technical information to health care professionals, agronomists, vector control boards, and others regarding the prevention and control of diseases or infestations, including infection prevention	Infectious Disease	Goal 2, Objectives 2.1 and 2.4	Low	NDHHS and NDDA (Co-Leads), NDSU Extension	NDHHS, NDDA and NDSU Extension budgets	2024, Short Term	NDHHS, 2024: Continues to send out information by health alert network (HAN) alerts. NDDA, 2024: Communicate with Dairy Boards, County Fair organizations, and industry groups to provide technical information. NDSU Extension, 2024: Develop educational materials and provide education on animal diseases. Conduct IPM surveys for agronomic pests (diseases and insects). Provide education to agronomists and farmers through field days, winter meetings, weekly Crop and Pest Reports, digital publications, and media.
OM-27	Provide technical assistance to local and tribal jurisdictions with hazardous materials planning	Hazardous Materials	Goal 1, Objective 1.1	Low	NDDES (Lead)	NDDEQ, HazChem Fund, EPA, NDDMR	2025, Short Term	NDDES, 2024: Provided technical assistance to Dunn County, Dickey County, Stark County, Renville County, and the Turtle Mtn. Band of Chippewa Tribal Nation.
OM-28	Promote and enforce safe handling, storage, and disposal of hazardous materials	Hazardous Materials	Goal 3, Objective 3.4	Low	NDDA (Lead) ~~NDHHS~~, NDDES, ~~NDSLIC~~, NDNG, NDDEQ,	CERCLA, DEQ Budget, Federal Programs	2024, Short Term	NDDEQ, 2024: The NDDES Hazardous Waste Program maintains a full staff of inspectors assigned to four regions of the state. Inspector contact information is publicly available and staff are on-call to provide timely assistance and guidance regarding waste handling procedures. NDDA, 2024: Provides producers and other responding agencies with technical expertise

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					NDDMR, NDSU Extension				regarding hazardous materials associated with agricultural production. NDDES, 2024: Haz Chem Section continues to support all efforts of reporting chemical storage as well as chemical releases. We work with all state agencies to maintain awareness and promote safe practices to industry partners. NDNG, 2024: Adhere to all federal and state hazardous material requirements through coordination with federal and state agencies during all aspects of our annual requirements and future projections. NDDMR, 2024: Field inspectors and agency safety officers work with oil and gas operators to maintain safe sites through inspections, and collaboration on rule and regulation development. NDSU Extension, 2024: Conducts pesticide certification trainings for the state and provide education and technical expertise regarding the handling of pesticides.
Removed Actions (Actions have been combined)									
~~**PR-7**~~	~~Update all 13 currently outdated Community Wildfire Protection Plans High~~	~~Wildfire~~	~~Goal 1, Objective 1.1~~	~~High~~	~~NDFS (Lead), USFA~~				

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies	Funding Source	Goal Completion, Short or Long Term	Status
	~~NDFS (Lead) USFA 2026, Short Term NDFS, 2024: Communities have not expressed any interest.~~							
~~SI-6~~	~~Encourage redundancies within power systems by assisting subapplicants to develop applications under State Homeland Security Grants, HMGP and BRIC~~	~~All Hazards~~	~~Goal 3, Objective 3.3, Goal 4, Objectives 4.1, 4.2, 4.3, and 4.5~~	~~High~~	~~NDDES (Lead) NDaRECs, NDSLIC~~	~~HMGP, BRIC~~	~~2028, Long Term~~	~~NDDES, 2024: HM Staff continues to aid applicants with developing project applications and implementing awarded generator projects. NDaRECs, 2024: No progress. NDSLIC, 2024: Continued progress, meeting and conducting outreach with the electrical sector, promoting protection, prevention, and resiliency.~~
~~SI-10~~	~~Assist subapplicants with application development for generators and other redundancies for back-up power sources on critical facilities, water towers, and lift stations~~	~~Severe Winter Weather, Severe Summer Weather~~	~~Goal 3, Objective 3.4, Goal 4, Objectives 4.1, 4.2, 4.3, and 4.5~~	~~Medium~~	~~NDDES (Lead)~~	~~HMGP, BRIC~~	~~2028, Long Term~~	~~NDDES, 2024: HM continues to aid applicants with developing project applications and implementing awarded generator projects.~~

Action #	Action	Hazard	Goal/ Objective	Priority	Agencies		Funding Source	Goal Completion, Short or Long Term	Status
~~**SI-12**~~	~~Assist subapplicants with application development for installation and update of outdoor warning systems~~	~~Severe Summer Storms~~	~~Goal 3, Objective 3.4 and Goal 4, Objectives 4.1, 4.2, 4.3, and 4.5~~	~~Medium~~	~~NDDES (Lead)~~	~~HMGP~~	~~2028, Long Term~~	~~NDDES, 2024: HM continues to aid applicants with developing project applications and implementing awarded early warning siren projects.~~	