



North Carolina Department of Public Safety Resilience Strategy Report

March 2022

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The North Carolina Department of Public Safety (NCDPS) is the primary state agency affected by or responsible for climate-related impacts to the public safety sector. The NCDPS includes the Divisions of Adult Correction and Juvenile Justice, the North Carolina Office of Recovery and Resiliency (NCORR), and North Carolina Emergency Management (NCEM), which includes North Carolina National Guard, State Capitol Police, and State Highway Patrol. NCDPS occupies or operates over 700 sites and 19 million gross square feet (GSF) of space and 32,000 acres spread throughout the State of North Carolina. NCDPS has 25,000 full-time employees and a general fund budget of \$2.2 billion.

The Climate Risks and Vulnerabilities Impacting NCDPS Services

Climate stressors increase vulnerability and risk for North Carolina’s communities, residents, emergency management services, correctional institutions, and NCDPS employee health and safety. Given the impacts of recent hurricanes, attention has been on the effects of riverine and overland flooding and storm surge, but wildfires, sea level rise, tidal flooding, extreme heat, and drought are also becoming major concerns. Sites prone to flooding and related issues for the Department of Prisons are Neuse and Carteret, and, Wayne Group Home for Juvenile Justice; each of which has faced an operational shut

down within the past four years, with the Wayne Group Home being shut down twice with substantial flood damage. Rising temperatures have also resulted in funding of over \$30 million to install air conditioning for inmate facilities that are currently only served by heating system.

Response to extreme weather events and disasters are a routine part of NCDPS mission and services. Plans and protocols such as the North Carolina Emergency Operations Plan and the North Carolina Hazard Mitigation Plan already exist to outline response protocols for when the state is hit by the natural hazards outlined in the state’s Climate Science Report. But as the frequency and severity of natural and climate disasters increase, NCDPS is focused on helping communities and residents shift their focus from response to preparedness. The State government can work together with communities to make them better off than they were before, improving their abilities to withstand stronger hurricanes, lingering tropical storms, more intense heat waves, larger wildfires, and more.

Agency Activities

The following chart provides an overview of the status and timeline of NCDPS’ activities intended to increase the resilience of state agency operations as well as residents’ livelihoods in the face of natural and climate disasters.

Activity	Status	Completion Date
<i>1.0 Adult Corrections and Juvenile Justice</i>		
1.1. Conduct a vulnerability assessment of facilities within the Division of Adult Corrections	Underway	Estimated: 12/31/2024
<i>2.0 Emergency Management</i>		
2.1. Make it easier for residents to identify their hurricane evacuation route	Complete	
2.2. Conduct a dam breach analysis on intermediate and high hazard dams	Underway	Estimated: 5/31/2022
2.3. Conduct building vulnerability assessments and identify mitigation strategies for areas impacted by riverine flooding from Hurricanes Matthew and Florence	Underway	Estimated: 4/30/2022
2.4. Conduct flood mitigation studies	Underway	Estimated: 4/30/2022
2.5. Improve data collection at sites where flooding is common	Underway	Estimated: 7/29/2022
2.6. Pilot a flood insurance program	Underway	Estimated: 8/15/2025
2.7. Begin administering the Building Resilient Infrastructure and Communities program	Ongoing	N/A
2.8. Conduct a vulnerability assessment of National Guard facilities and relocate buildings as needed	Ongoing	N/A
2.9. Increase National Guard recruitment to meet the growing need for State Active Duty as a result of climate change impacts	Ongoing	N/A
<i>3.0 Housing Recovery and Resilience</i>		
3.1. Increase the durability of replacement homes	Complete	August 2021

3.2. Create an affordable housing strategy in partnership with the UNC Development Finance Initiative	Underway	Estimated: August 2025
3.3. Fund more than 1,000 new affordable housing units in regions hit by Hurricanes Matthew and Florence	Underway	Estimated: December 2026
3.4. Purchase homes in the floodplain	Underway	Estimated: April 2026
3.5. Repair and elevate storm-damaged homes	Ongoing	N/A
3.6. Launch the Affordable Housing Development Fund	Planned	Estimated: March 2023
4.0. Resilient Community Development		
4.1. Develop a climate resilience planning guide for local leaders	Underway	Estimated: December 2022
4.2. Develop an online resilience resource center for local governments and community leaders	Underway	Estimated: December 2023
4.3. Support nine regions in the eastern half of the state to complete climate vulnerability assessments and develop implementation pathways for 5-10 priority projects	Underway	Estimated: December 2022
5.0. Resilient Critical Infrastructure		
5.1. Work with local governments impacted by Hurricane Matthew to restore damaged critical infrastructure	Underway	Estimated: June 2024
6.0. State Agency Coordination on Resilience Activities		
6.1. Coordinate annual State agency resilience strategy reports	Ongoing	N/A
6.2. Facilitate interagency communication on resilience projects	Ongoing	N/A
7.0. Structured Stakeholder Input		
7.1. Facilitate a stream management and flooding reduction working group	Ongoing	Started December 2021
7.2. Facilitate the State Disaster Recovery Task Force to coordinate efforts and advise state government as needed on recovery and resilience	Ongoing	N/A

Activity Progress

1.0. Adult Corrections and Juvenile Justice

1.1. Conduct a vulnerability assessment of facilities within the Division of Adult Corrections **UNDERWAY**

Funding in the amount of \$3,000,000 was approved to begin Phase I of a Comprehensive Facility Strategy for our Prison Facilities. The funding is an initial step of a \$25,000,000 effort to develop an operational strategy and model for the prison system. The goal is to complete this facility

assessment efforts by 2024. It will include a vulnerability review as part of Facility Condition Index for all Prison locations. The Condition Index will be coupled with operational data to determine the most efficient usage of all resources for the custody management of inmates.

2.0. Emergency Management

2.1. Make it easier for residents to identify their hurricane evacuation route COMPLETE

In 2020, North Carolina Emergency Management launched the Know your Zone initiative to make it easier for residents to know their hurricane evacuation route. Predetermined zones were established in the twenty coastal counties to simplify the evacuation process during an emergency. In addition to a user-friendly look up tool that allows individuals to identify their evacuation zone based on location, this initiative provides updated hurricane preparedness guides and an updated digital toolkit to improve personal preparedness and resiliency efforts.

2.2. Conduct a dam breach analysis on intermediate and high hazard dams UNDERWAY

In 2020, North Carolina Emergency Management began conducting dam breach analyses on the remaining 859 intermediate and high hazard dams in North Carolina that currently do not have dam failure inundation boundaries or building and road risk information. The agency is developing rainfall runoff hydrological modeling for 287 dams, installing gauges to monitor for dam failure at 130 critical state and locally owned dams, and integrating all data into a secure monitoring, alert, and warning system. Estimated completion date is 5/31/2022.

2.3. Conduct building vulnerability assessments and identify mitigation strategies for areas impacted by riverine flooding from Hurricanes Matthew and Florence UNDERWAY

In 2020, North Carolina Emergency Management began a building level risk assessment and mitigation strategy development process for approximately 12,000 square miles of unstudied streams heavily impacted by riverine flooding from Hurricanes Matthew and Florence. Estimated completion date is 4/30/2022.

2.4. Conduct flood mitigation studies UNDERWAY

In 2020, North Carolina Emergency Management initiated new flood mitigation studies for the Northeast Cape Fear River, Cape Fear River, Little River, and Cashier River Basins. Estimated completion date is 4/30/2022.

2.5. Improve data collection at sites where flooding is common UNDERWAY

To improve the data collection capabilities of the State Emergency Response Team, North Carolina Emergency Management purchased and is installing river gauges at 71 additional sites statewide and updated flood inundation libraries and risk assessments for these additional sites beginning in 2020. Estimated completion date is 7/29/2022.

2.6. Pilot a flood insurance program UNDERWAY

The North Carolina Office of Recovery and Resiliency and North Carolina Emergency Management are working towards piloting a flood insurance program. The initiative is in the progress of being

integrated into the existing ReBuild NC Homeowner Recovery Program supporting communities significantly impacted by Hurricanes Matthew and Florence.

At this time NCORR continues to refine program policies, procedures, and system of record business requirements. NCORR has discussed flood insurance purchase requirements with FEMA and NFIP generally and as it relates to newly constructed structures. Flood insurance policies cannot be transferred from building-to-building, but rather are transferred from owner-to-owner. Hence, an eligible applicant's existing flood insurance policy on the old structure would need to be cancelled and a new flood insurance policy would need to be purchased for the new replacement structure. NCORR was informed by FEMA that two-year flood insurance policies may not be pre-purchased, and it takes 30-days for a flood insurance policy to be in effect. NCORR is developing procedures with all of FEMA's requirements in mind to ensure there are no lapses in flood insurance for eligible applicants. NCORR is also reviewing FEMA's risk rating for North Carolina as that impacts flood insurance premiums.

2.7. Begin administering the Building Resilient Infrastructure and Communities program **ONGOING**

In 2020, the federal government released its pre-disaster mitigation program, Building Resilient Infrastructure and Communities (BRIC). North Carolina Emergency Management launched BRIC, which aims to shift the focus away from reactive disaster spending and toward research-supported, proactive investment in community resilience. In the 2020 BRIC application, 32 projects were submitted for the competitive evaluation by FEMA and 5 were selected for award worth approximately \$30M. The State is currently waiting for these projects to receive award letter and begin work. In the 2021 BRIC application, 49 projects totaling approximately \$167M were submitted for the competitive evaluation by FEMA. FEMA review of all submitted projects is ongoing with expected notification date of selection in July 21.

2.8. Conduct a vulnerability assessment of National Guard facilities and relocate buildings as needed **ONGOING**

The North Carolina National Guard is shifting to a "Hub and Spoke" model of a few large Regional Readiness Centers with a network of smaller Readiness Centers surrounding them strategically. The Guard's Construction and Facility Maintenance Office is applying data on sea level rise and other resilience information to determine which current facilities are not sustainable given current climate projections. With that information, the Guard will prioritize new construction projects and decide what properties can be retired. This process is expected to be ongoing over a period of decades as Congress makes more funds available to re-envision how the National Guard operates from a structural standpoint. Climate resilience will always be a critical element of decision making.

2.9. Increase National Guard recruitment to meet the growing need for State Active Duty as a result of climate change impacts **ONGOING**

As the climate evolves and hurricanes and flooding become more frequent and more extreme, the National Guard expects State Activity Duty deployments to increase. Membership in the Guard is becoming more demanding and impactful on a citizen's life and work, making the choice to

commit a greater potential burden. Obviously, this extra burden will likely affect recruitment and retention. Presently, the Guard does not have answers to the questions of recruitment and retention, but NC's Guard is part of a larger national conversation among all state Guards on this aspect of their future, and how to address it.

3.0. Housing Recovery and Resilience

3.1. Increase the durability of replacement homes COMPLETE

NCORR transitioned its home replacement program from providing manufactured housing to providing modular housing on homeowner properties. Modular housing is more durable and resilient to climate hazards; solid foundations also increase the durability of the housing units.

3.2. Create an affordable housing strategy in partnership with the UNC Development Finance Initiative UNDERWAY

NCORR has leveraged the experience of the UNC Development Finance Initiative to build a strategy for the development and preservation of rental housing in the 23 counties most impacted and distressed by Hurricanes Matthew and Florence. The planning study will identify the types of affordable and resilient housing, including multi-family dwellings, single family homes, and other housing types most needed by those counties. Further, the study will evaluate the availability of suitable properties, the development community's capacity, and the financial feasibility of the housing types needed. The plan is intended to inform the allocation of recovery funds through NCORR's affordable housing development fund to create new affordable housing that is safer, more resilient, and better matched with the needs of each impacted area.

3.3. Fund more than 1,000 new affordable housing units in regions hit by Hurricanes Matthew and Florence UNDERWAY

To address this commitment made by NCORR in 2021, approximately \$65.9 million of the state's Community Development Block Grant–Disaster Recovery funds are being used in partnership with the N.C. Housing Finance Agency, public housing authorities in the cities of Lumberton and Wilson, and Cumberland County government to increase safe, affordable housing opportunities for low-to-moderate income households. In one example, NCORR is partnering with the N.C. Housing Finance Agency to begin construction on affordable housing outside the floodplain in Fayetteville. The project is approximately 80% complete; NCORR expects units to be occupied in 2022. The agency has committed to building additional units in Goldsboro, Brunswick County, Columbus County, Craven County, Edgecombe County, New Hanover County, Onslow County, and Robeson County, with project completion and the units forecast to be occupied no later than March of 2025.

In addition, the state's initial Hurricane Matthew Community Development Block Grant program created the Public Housing Restoration Fund with \$5 million to relocate affordable housing that had been impacted by the storm. Since that time, the fund has increased to a total of \$26 million, which now includes an allocation for Hurricane Florence, to relocate or repair damaged public housing. The intent of this program is to move some of the state's most vulnerable residents out of harm's way. Projects are currently approved in the cities of Lumberton and Wilson. NCORR has dedicated over \$8.6 million to help public housing authorities in Wilson and Lumberton replace

106 low-income apartments on new land that will keep the residents safe from future flooding events. Wilson Housing Authority will complete construction and have at least half of the units rented by low-income households by December of 2022, while the Housing Authority of the City of Lumberton will complete construction on its project in the first half of 2025 with the goal of having low-income families in safe, affordable housing by December of that year.

3.4. Purchase homes in the floodplain

UNDERWAY

NCORR administers the ReBuild NC Strategic Buyout Program, which is a voluntary program that purchases properties that are at-risk for flooding, turn them into deed-restricted greenspace. The Strategic Buyout Program engages closely with local governments and communities to identify contiguous areas that are good fits for the program, and the program offers generous financial incentives to encourage applicants to move to places that are less at-risk for flooding. Since the program began accepting applications in January 2020, 184 property owners have applied for the program. ReBuild NC is made possible through U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) and Community Development Block Grant – Mitigation (CDBG-MIT) funding.

3.5. Repair and elevate storm-damaged homes

ONGOING

NCORR administers ReBuild NC Homeowner Recovery Program, North Carolina’s long-term disaster recovery program, to repair and elevate storm-damaged homes. ReBuild NC is made possible through U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) and Community Development Block Grant – Mitigation (CDBG-MIT) funding.

3.6 Launch the Affordable Housing Development Fund

PLANNED

NCORR hopes to launch this program, which will expand the number and type of affordable housing projects receiving support beyond the partners currently being funded, in the first quarter of 2023. The fund will focus on large-scale, multifamily rental units, as well as one to four family rental/home ownership dwellings and rehabilitating single-family and multi-family homes.

4.0. Resilient Community Development

4.1. Develop a climate resilience planning guide for local leaders

UNDERWAY

NCORR hired a consultant to coordinate the development of a North Carolina resilient communities planning guide. The guide will empower local and regional leaders, including government officials as well as business, nonprofit, and community leaders, to understand their climate vulnerabilities and develop shared priorities for action. The guide will have two components: A playbook and an idea book. The playbook will guide users through the process of building a team, analyzing vulnerabilities and assets, brainstorming and prioritizing actions, and identifying implementation steps. The idea book will provide examples of projects, programs, and policies that improve resilience across social, economic, and environmental domains. The planning guide is supported by funding from the Economic Development Administration. It is being developed as a component of RISE in conjunction with the North Carolina Resilience Communities program, run in partnership with the Department of Environmental Quality.

4.2. Develop an online resilience resource center for local governments and community leaders **UNDERWAY**

NCORR, in partnership with the Department of Environmental Quality and several North Carolina environmental nonprofits and universities, has begun a project to develop an online climate resilience clearinghouse for local governments and community leaders. The tool is called for in the 2020 North Carolina Climate Risk Assessment and Resilience Plan (2020 Plan) and in the North Carolina Natural and Working Lands Action Plan. The resource will “point users to relevant climate data and best practices for building resilience in an equitable way” (p. 7-15, 2020 Plan). The project is supported by funding from the US Climate Alliance.

4.3. Support nine regions in the eastern half of the state to complete climate vulnerability assessments and develop implementation pathways for 5-10 priority projects **UNDERWAY**

In partnership with NC Rural Center (NCRC), NCORR launched the Regions Innovating for Strong Economies and Environment (RISE) Regional Resilience Portfolio Program to address the need for local capacity building around long-term disaster recovery and resilience planning and implementation. To support the program, NCORR hired three consulting firms to work with nine regions in the eastern half of the state. These firms will complete vulnerability assessments and support local stakeholders as they identify 5-10 priority projects that reduce risk and increase resilience to hurricanes, flooding, heat waves, and other extreme weather events. NCRC-trained facilitators—who live or work in the regions to which they are assigned—coordinate stakeholder input in partnership with each region’s Council of Governments. The final deliverable will include outlines detailing how the region could move forward with implementing each priority project. NCORR anticipates a December 2022 project completion date. RISE is part of the North Carolina Resilience Communities program, run in partnership with the Department of Environmental Quality. Funding from the Economic Development Administration and US Department of Housing and Urban Development supports this project along with one full-time Resilience Communities Program Manager.

5.0. Resilient Critical Infrastructure

5.1. Work with local governments impacted by Hurricane Matthew to restore damaged critical infrastructure **UNDERWAY**

NCORR’s Infrastructure Program helps communities in Bladen, Edgecombe, and Nash Counties improve stormwater management systems by committing \$5.6 million to projects that will help prevent damage from future flooding events. These projects include flood gates, drainage repairs, access roads, water tanks, generators, and various other improvements identified by the city or county government as a critical need, with projects scheduled to be completed by year-end 2023. The program also includes significant site development on a 53-acre site in Princeville, NC, to help establish long-term resilience and community viability, also expected to be completed by June of 2024. In Nashville, NC, the program replaced parts of a key drainage system that had been destroyed by previous flooding.

6.0. State Agency Coordination on Resilience Activities

6.1. Coordinate annual State agency resilience strategy reports **ONGOING**

NCORR guides State agencies as they submit their annual Agency Resilience Strategy reports, which are called for in the 2020 Climate Risk Assessment and Resilience Plan (2020 Plan). The reports outline agencies' current and planned actions to increase resilience and describes progress on implementing strategies identified in the 2020 Plan.

6.2. Facilitate a stream management and flooding reduction working group **ONGOING**

NCORR is establishing an intergovernmental working group composed of representatives from the Department of Environmental Quality and other relevant state agencies, local governments, and other stakeholders to identify legislative, economic, jurisdictional, and other challenges related to stream management and flooding reduction. NCORR submitted its first report to the Joint Legislative Commission on Governmental Operations and the Fiscal Research Division regarding the findings and recommendations of the working group. Reports will be submitted biannually starting in 2022. These actions fulfill § 143B-1041 of the 2021 Appropriations Act.

7.0. Structured Stakeholder Input

7.1. Facilitate interagency communication on resilience topics projects **ONGOING**

NCORR facilitates the Interagency Resilience Team (IRT), as called for in Chapter 7 of the 2020 Climate Risk Assessment and Resilience Plan, to provide a structure for state staff to coordinate resilience projects and to support the development of annual State Agency Resilience Strategy Reports. The IRT includes at least one resilience lead from each state cabinet agency, as well as the Department of Agriculture and Consumer Affairs and the Wildlife Resources Commission. This team meets monthly.

7.2. Facilitate the State Disaster Recovery Task Force to coordinate efforts and advise state government as needed on recovery and resilience **ONGOING**

NCORR manages the State Disaster Recovery Task Force (SDRTF), which supports and advises state agencies as they address long-term recovery and undertake resilience-building initiatives statewide. The SDRTF is made up of 12 committees called Recovery Support Functions (RSFs). This year, the Environmental Preservation RSF recommended the State fund the development of a Flood Resilience Blueprint, which would guide efficient and effective funding decisions across federal, state, and local government to reduce flooding and improve economic, social and environmental outcomes across the state. DEQ received funding in the 2021 Appropriations Act to complete the Flood Resilience Blueprint. The Nonprofit and Volunteerism RSF worked on its first set of recommendations on improving diversity, equity, and inclusivity in disaster recovery and resilience. Two overarching themes of the recommendation document are to strengthen relationships between North Carolina Emergency Management and nonprofits with strong ties to Black and Latino populations, and to allocate disaster resources in a way that reduces equity gaps. The Housing RSF discussed how the American Rescue Plan Act programs can work together to support North Carolina residents to obtain and stay in safe, secure, and affordable housing across income spectrums.

Looking Ahead

In addition to the facility condition assessment that will be conducted over the next two years, Central Engineering continues to lead efforts for NCDPS in the areas of energy reduction, water reduction, and optimization of building systems.

In 2022, NCORR will make progress on projects that support resilient housing and communities throughout North Carolina. The Strategic Buyout Program plans to expanding into areas that were predominantly affected by Hurricane Florence and to closing on its first property. The Public Housing Restoration Fund will begin supporting Hurricane Florence-affected areas in 2022, and NCORR anticipates that Community Development Block Grant – Disaster Recovery (CDBG-DR) grant dollars from the U.S. Department of Housing and Urban Development will be awarded to the three to five public housing authorities most impacted by Hurricanes Florence and Matthew. Also in 2022, NCORR will finalize the design of the Affordable Housing Development Fund, which is expected to launch in the first quarter of 2023. These initiatives and more are serving the need for safe, affordable housing among families with the greatest financial need.

NCORR's Infrastructure Program will focus on helping local government leaders implement their funded critical infrastructure projects, such as in Robeson County where nine distinct projects will be progressing through the mandated tollgate process required prior to completion. In late 2022 or early 2023, a partnership with the Duke Energy Foundation will provide \$65,000 in project funding to each of the nine regions with a Regional Resilience Portfolio. Furthermore, the agency plans to release its resilience planning guide for local leaders and being building a North Carolina resilience clearinghouse of resources.

NCORR will also continue supporting interagency communication and seeking stakeholder and expert input to develop new programs and policies that support climate and disaster resilience. The Stream Management and Flooding Reduction Working Group will meet quarterly and deliver its second and third set of recommendations to the State legislature, as required by § 143B-1041 of the 2021 Appropriations Act.