



2025 Climate Strategy Report

Department of Environmental Quality

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Introduction

About the Department of Environmental Quality

The North Carolina Department of Environmental Quality (DEQ) is the lead stewardship agency for the protection of North Carolina's environmental resources. We provide science-based environmental stewardship for the health and prosperity of all North Carolinians. We envision a North Carolina where people are free to pursue prosperous and healthy lives supported by clean air, clean water, and clean land.

Department of Environmental Quality's Vulnerabilities to Climate Change

North Carolina is facing increasingly intense and frequent extreme weather events, higher high tides, and warmer ocean and river temperatures. In 2025, just months after Hurricane Helene, the state's most significant, deadliest, and costliest disaster, North Carolina continued to confront a series of extreme weather-related challenges. These included Tropical Storm Chantal in central North Carolina, accelerated coastal erosion fueled by an active Atlantic hurricane season, harmful algal blooms that affected water quality, extended periods of fall drought, an active early-2025 wildfire season, and urban flooding triggered by severe thunderstorms.

Every division within DEQ is working to understand and address the risks posed by our increasingly volatile weather, safeguarding both staff and the broader communities we serve. More frequent and severe weather events can pose new challenges for air and water quality, coastal management, marine fisheries, and other DEQ permitting programs.

Department of Environmental Quality's Approach to Fulfilling the Strategies in the Climate Risk Assessment and Resilience Plan

We continue to advance and innovate on the recommended actions outlined in the 2020 Risk and Resilience Plan, making resilience to extreme weather one of our top priorities in 2025. As the Stein Administration's lead agency on resilience, DEQ leads efforts to help communities reduce vulnerabilities to extreme weather. Central to this work are programs that support communities in both planning and implementing resilience projects, backed by dedicated project funding. In 2025, DEQ awarded more than \$17 million to 51 communities through the Flood Resilience Blueprint and Resilient Coastal Communities Programs, enabling cities and towns across North Carolina to design, build, and strengthen projects that improve their capacity to withstand increasingly severe and frequent storms. DEQ has over 7 billion dollars in active projects across the state in 2025 to repair and upgrade drinking water, wastewater, and septic systems. Each project is required to enhance system resilience against future flooding.

To help coordinate resilience efforts across agencies, the State Resilience Office joined DEQ in 2025. This office leads the implementation of Risk and Resilience Plan activities such as Climate Strategy Reporting and the Interagency Resilience Team, while working with other agencies to track Executive Order 305 and contribute to statewide reporting.

DEQ continues to lead statewide efforts to inventory source of greenhouse gas emissions and mitigate emissions from vehicles as part of North Carolina's broader air pollution reduction strategy. Building on Executive Orders 80, 246, and 305, DEQ has advanced programs that accelerate the transition to cleaner transportation using Volkswagen Settlement funding, Mobile Source Emission Reduction Grants, and support for EPA's electric school bus initiatives. These programs have directed resources toward replacing older diesel vehicles with zero-emission alternatives and expanding charging infrastructure.

The Department also advances scientific understanding of how climate change affects North Carolina's landscapes and people. Example initiatives include the Albemarle-Pamlico National Estuary Partnership's research on coastal habitats, the North Carolina Geological Survey's landslide mapping program, and the Drought Management Advisory Council's monitoring efforts.

Finally, as part of a holistic climate strategy, DEQ provides funding to communities to advance clean, affordable, and reliable energy for all North Carolinians. In 2025, DEQ rolled out Energy Saver NC to 98 of 100 counties, with Wake and Mecklenburg Counties coming on board in early 2026. Energy Saver NC is a program that helps residents save money on their utility bills by providing funding for improvements in household energy efficiency. Following the devastation of Hurricane Helene, the DEQ granted \$5 million to install mobile and permanent microgrids to provide accessible power in the wake of disasters.

Department of Environmental Quality's Progress Toward Reducing Emissions

DEQ is committed to reducing energy use in our operations and across state agencies. The Utility Savings Initiative (USI) is housed within the Department's State Energy Office (SEO). The program advises the Department, cabinet agencies and UNC System schools on how to reduce energy use.

From utility data collection efforts by SEO, state-owned buildings collectively reduced their Energy Use Intensity (EUI) by 28% in FY24 compared to the baseline of FY03. This is an avoidance of \$159M in utility costs in FY24 alone, and a collective avoidance of \$2.26B since FY03. Roughly 12.3 MMTCO_{2e} of greenhouse gas emissions have been avoided since FY03, the equivalent of approximately 3.2 coal-fired power plants.

As an agency, DEQ has continued to take steps to reduce energy use in its facilities through renovations, HVAC improvements and lighting upgrades. For example, DEQ's work to improve the building envelope at the Reedy Creek Lab Campus received a U.S. Department of Energy (DOE) award and resulted in annual CO₂ reductions of 147,600 lbs. The agency has also expanded its own electric vehicle fleet and

charging network. Together, these actions demonstrate measurable progress toward North Carolina's climate goals by cutting pollutants, improving air quality, lowering greenhouse gas emissions, and positioning the state as a leader in clean transportation.

Goals, Strategies, and Actions

1.0. Reduce greenhouse gas emissions

1.1 Reduce energy consumption per square foot in state-owned buildings by at least 40% from fiscal year 2002-2003 levels

1.1.1 Collect and Evaluate Greenhouse Gas Reduction Data

Status: Ongoing

Expected Completion Date: Ongoing

From utility data collection efforts by SEO, state-owned buildings collectively reduced their Energy Use Intensity (EUI) by 28% in FY24 compared to the baseline of FY03. This is an avoidance of \$159M in utility costs in FY24 alone, and a collective avoidance of \$2.26B since FY03. Roughly 12.3 MMTCO_{2e} of greenhouse gas emissions have been avoided since FY03, the equivalent of approximately 3.2 coal-fired power plants.

Utility and energy usage data is actively being collected and analyzed for FY25 and will be available at the end of calendar year 2025. This effort is completed annually as part of the Utility Savings Initiative (USI) program and the energy usage data is reported to the NCDEQ-SEO.

The most recent inventory was completed by NCDEQ in January 2024, covering historical emissions from 1990 to 2020 and projecting future emissions through 2050 under a BAU scenario. These projections assume no new federal or state policies beyond those in effect as of 2022 (e.g., Duke Energy's 2023 Carbon Plan/Integrated Resources Plan (CPIRP), USDOT Corporate Average Fuel Economy (CAFE) standards for cars and trucks) Division of Air Quality is scheduled to release a new GHG inventory in 2026.

The SEO has the Climate Pollution Reduction Program (CPRG) in place to evaluate current GHG reduction measures being completed across the state. This program provides a snapshot of NC's progress towards the 50% GHG emission reduction by 2030 goal and zero emissions goal by 2050.

1.1.2 Provide Training and Technical Assistance

Status: Ongoing

Expected Completion Date: Ongoing

The USI program provides preliminary audits and project evaluations and implements strategy assistance to meet the EO80 goals. The USI program conducts regularly scheduled meetings with energy managers to share best practices and opportunities for energy savings. Various subject-matter experts from the public and private sectors are invited to discuss tested approaches that may assist in meeting EO80 goals. These meetings provide the necessary tools and training foundation to improve energy efficiency, promote sustainability, increase resiliency, and reduce operating costs within current State budgetary constraints.

In the coming 12 months, SEO plans to focus our efforts more on targeting our USI entities and partners residing in low-income and disadvantaged communities within North Carolina.

1.1.3. DEQ Facility Upgrades

Status: Completed

Expected Completion Date: Completed

DEQ's Division of Facilities Health & Safety prioritizes energy efficiency in renovation and upgrade projects. Completed projects include installation of new evaporators and condensers for four walk-in coolers/freezers at the Reedy Creek Lab Campus, installation of a standalone HVAC system for DMF Morehead City Shellfish lab to allow for night and weekend temperature setbacks of the building's main HVAC system, installation of LED parking lot lighting at the Asheville Regional Office and restoration of the Green Square living roof and living walls. Additionally, a building envelope sealing project at the Reedy Creek Biochemistry earned a DOE award and combined with additional energy saving upgrades, reduced energy usage by over 30% with a CO2 reduction of 147,600 lbs.

DEQ also purchased and installed 10 new energy efficient fume hoods. The new energy efficient fume hoods replaced the previous hoods that were largely original to the building's construction, circa 1990. The old hoods were manufactured to be effective at an exhaust flow of 150 fpm across the sash opening. The new fume hoods are expected to operate efficiently between 85 and 125 fpm and are currently being operated at 100 fpm. The reduced face velocity translates directly into lower exhaust air rates, which in turn, translates into energy savings. Approximately 33% of the make-up air conditioning energy will be saved over the lifetime of each replaced hood's operation.

1.2 Support the use and expansion of energy efficient and clean energy resources

1.2.1 Energy Toolkit

Status: Ongoing

Expected Completion Date: Ongoing

In January of 2023, the Environmental Stewardship Initiative (ESI) introduced the Energy Toolkit program. Available upon request and free of charge, this program loans energy monitoring equipment (FLIR Infrared Camera, Ultrasonic Leak Detector, etc.) to ESI members and has to date been used by three organizations. By monitoring energy consumption, it allows organizations to identify target areas for energy reduction projects. Members have access to a FLIR Infrared Camera, Ultrasonic Leak Detector, AC Current Probe, Electricity Usage Monitor, Color LED Light Meter, Power Data Logger, and a Power Quality Clamp. In 2025, the toolkit was used by four organizations, and by seven organizations since the program's start.

ESI staff will continue to promote the availability of this toolkit and will monitor the impact on member organizations' energy usage and progress towards energy conservation goals.

1.2.2 DEQ Offshore Wind Coordinator and Interagency Wind Working Group

Status: Underway

Expected Completion Date: Ongoing

DEQ's offshore wind coordinator has been convening an interagency offshore wind working group (OWWG) with members comprised of staff from the Division of Coastal Management (DCM), Wildlife Resources Commission, and the Division of Marine Fisheries (DMF). The goal of the OWWG is to coordinate and share information pertaining to environmental resource-related topics, identify necessary data and data gaps, and identify additional research needed to review proposed wind energy projects. The group also determines strategies to engage with regional/national efforts and identify relevant data held by other state and federal agencies, researchers, and stakeholders. The OWWG has not met or progressed towards its goal due to the current deprioritizing of wind energy projects.

1.2.3 Federal Consistency Review

Status: Underway

Expected Completion Date: Ongoing

The federal Coastal Zone Management Act (CZMA; 16 USC 1451 et seq.) provides states with a strong voice in federal agency actions through what are known as “federal consistency” provisions. While federal agencies are exempt from permitting requirements, the CZMA requires that federal actions that could have reasonably foreseeable coastal effects within and outside the coastal zone must be found consistent with the enforceable policies of a state’s federally approved coastal management program. Under the CZMA, federal actions that trigger the federal consistency review process fall into four categories: federal agency activities, federal licenses or permits, outer continental shelf (OCS) plans, and federal assistance to state and local governments (15 CFR 930).

Since the federal Bureau of Ocean Energy Management (BOEM) is authorizing offshore wind projects, a federal consistency review is applied. DCM is the lead agency reviewing federal consistency determinations for offshore wind off the North Carolina coast. DCM will review the submitted information pursuant to the management objectives and enforceable policies of Subchapters 7H and 7M of Chapter 7 in Title 15A of the North Carolina Administrative Code and will either find the proposals consistent, consistent with conditions or inconsistent with North Carolina’s approved coastal management program.

1.3 Increase the number of registered Zero Emission Vehicles to at least 1,250,000 by 2030 so that 50% of in-state sales of new vehicles are zero-emission by 2030

This section is not applicable to the activities of DEQ.

1.4 Prioritize Zero Emission Vehicles (ZEVs) in the purchase or lease of new vehicles and for agency business travel

1.4.1 Transition to Zero Emission Vehicles (ZEVs)

Status: Ongoing

Expected Completion Date: Ongoing

Like divisions across the Department, DCM is working with the State's motor fleet to implement a transition to ZEVs to replace current gas-powered state vehicles. As of Summer 2023, DCM has received one electric vehicle, which is currently utilized whenever feasible. As a state-owned vehicle available for all DCM staff, this provides an effective and sustainable means of transportation for interaction with local CAMA communities to increase their resilience to coastal hazards. In particular, the Resilient Coastal Communities program (RCCP) is committed to incorporating environmental justice and equity considerations in each program phase. By meeting with community leaders in their communities, the RCCP staff can conduct outreach and build trust within communities.

1.4.2 Promote Use of EVs for Business Travel

Status: Ongoing

Expected Completion Date: Ongoing

DEQ has built out an EV charging network with 28 chargers at our regional offices connecting our department across the state and has 5 fully electric vehicles available for staff use. The network was created through partnerships with our landlords, including specifications in the lease RFPs, negotiating early lease renewals, and SEO grants. DEQ has been able to reduce our fleet and its underutilized vehicles by creating an unassigned pool of hybrid/EV fleet vehicles based at our Reedy Creek Lab Campus in Raleigh. Vehicles are available through an online reservation system; in the first eight months of 2023, 220 reservations were made.

The agency has also implemented a vehicle need and interview vehicle selection process for each new or updated vehicle requested to ensure that the most efficient vehicle is selected to meet the requesting division's needs.

1.5 Initiate other initiatives to decarbonize the transportation sector

1.5.1 Volkswagen Settlement

Status: Ongoing

Expected Completion Date: Ongoing

The Volkswagen Settlement project provided funding to promote the purchase of medium- and heavy-duty (MHD) vehicles that replace older diesel vehicles, with the priority given to purchases of ZEVs. Additionally, the project provides funding to install or expand existing charging infrastructure to support ZEVs. Special consideration is given to projects in areas that are historically underserved. In October 2024, NCDEQ announced approximately \$1.8 million in funding available for the Volkswagen Settlement Phase 2 Community and Destination Zero Emission Vehicle Infrastructure Program to install new DC Fast and Level 2 chargers across the state. Thirteen applications were selected for full or partial funding by the program selection committee in June 2025.

In the next twelve months the Department anticipates announcing project awards for the Community and Destination Program applications, ongoing projects completions and the continuation of adding success stories to an interactive map for completed projects, especially showcasing ZEV purchases.

1.5.2 Advanced Clean Trucks (ACT) Adoption

Status: Proposed

Expected Completion Date: Unknown

The ACT is a California regulation that requires a certain percentage of MHD vehicle sales to be ZEV. The sales targets increase overtime by vehicle class. North Carolina Exec. Order 271 requires the adoption of this regulation, and draft rulemaking and fiscal analysis have been completed following several public listening sessions. The listening sessions included promoting environmental justice and equity.

In the next twelve months, it is anticipated that the rulemaking process will be completed, given the required regulatory approvals.

1.5.3 Support EPA Electric Buses Funding

Status: Underway

Expected Completion Date: 2024

SEO is providing State Energy Program funding to support the Environmental Protection Agency's (EPA) EV School Buses and bus charging station opportunities. SEO provided additional funding for charging station installation costs for the three NC school systems that awarded buses and chargers by the EPA.

Funding was awarded to Bladen, Columbus and Halifax County school systems. Bladen County received funding for five electric school bus chargers and the installation of those chargers have occurred. SEO is awaiting invoices from Bladen County to complete this project. Columbus County received funding for nine electric school bus chargers. Columbus County installed the chargers and submitted invoices for payment to SEO to close out the project. Halifax County received funding for four electric school bus chargers. The four chargers were installed, and invoices were submitted to the SEO to close out the project.

1.5.4 Mobile Source Emission Reduction Grants

Status: Ongoing

Expected Completion Date: Ongoing

The Mobile Source Emission Reduction Grants provides funding to promote the purchase of MHD vehicles that replace older diesel vehicles, with the priority given to purchases of ZEVs. The Mobile Sources Emissions Reduction program is funded by the U.S. Environmental Protection Agency's (EPA) Diesel Emissions Reduction Act program. Funds may be supplemented with North Carolina Volkswagen Mitigation Trust funds. Special consideration is given to projects in areas that are historically underserved. In October 2024, NCDEQ announced approximately \$1.1 million in funding available for the Mobile Source Emission Reduction Grant (MSERG) Program to replace old diesel powered MHD equipment and vehicles.

In the next twelve months the Department anticipates the outside project selection committee selecting projects for funding, announcing project awards, making additional funds available for the purchase of MHD equipment and vehicles and adding more success stories to an interactive map for completed projects, especially showcasing ZEV purchases.

1.6 Initiate other projects aimed at reducing statewide greenhouse gas emissions

1.6.1 Develop Climate Pollution Reduction Grant Planning

Status: Underway

Expected Completion Date: 2027

As a part of the Inflation Reduction Act, the EPA created the Climate Pollution Reduction Grant (CPRG) program to provide states, local governments, territories and tribes with funds to develop and implement plans for reducing greenhouse gas emissions and other harmful pollutants. This two-phase program provides \$250 million for noncompetitive planning grants and made available nearly \$4.6 billion for competitive implementation grants.

As part of phase one, North Carolina received a \$3 million planning grant award. Central Pines and Centralina Regional Councils, two North Carolina metropolitan service areas (MSA), each received \$1 million CPRG planning grant award as well. As part of phase two, North Carolina and the MSAs collaborated to submit a CPRG Implementation Plan to apply for nearly \$200 million in CPRG Implementation Award funding. Unfortunately, the NC CPRG Implementation Plan was not funded by the EPA.

The CPRG Planning Grant has the following requirements/deliverables:

	CPRG Planning Grant Requirements	Status
1	Produce and publish a Priority Climate Action Plan (PCAP)	Complete (03/2024)
2	Revise and update the existing NC Greenhouse Gas Inventory	Complete (01/2024)
3	Submit CPRG Implementation Plan	Complete (04/2024)
4	Produce and publish a Comprehensive Climate Action Plan (CCAP)	Underway - Due 12/2025
5	Produce and publish a Final Status Report	Due 06/2027

As required by the CPRG grant, North Carolina published a Priority Climate Action Plan (PCAP) (March 1, 2024) and will publish a Comprehensive Climate Action Plan (CCAP) by December 1, 2025.

The PCAP identified North Carolina’s highest priority greenhouse gas reduction measures and determines methods for ensuring equitable implementation of these measures for the benefit all North Carolinians. The CCAP will update and expand upon North Carolina’s existing climate strategies, ensuring that these documents align with the latest available science, modeling, legislation, and best practices.

Beginning in October 2024, the CPRG team updated and identified new greenhouse gas (GHG) reduction measures since the PCAP submission. They conducted statewide stakeholder outreach events in early 2025, both in-person (across five cities) and virtually, to gather feedback and identify potential GHG initiatives. Following the outreach and GHG emissions research, the team began drafting the CCAP. Sector-specific workgroups met regularly to refine GHG reduction methodologies and highlight key sector projects. The CPRG team contracted ICF for technical support, document consistency, and EPA compliance. The CPRG also funded a workforce analysis with the Department of Commerce and contracted APNEP for specialized mapping. By July 2025, draft measures were reviewed with stakeholders, and a draft CCAP was completed for internal review. A final draft was released for public comment in September 2025. Public comments were incorporated and sent to DEQ leadership and the Governor’s office for final review. The complete CCAP is due to the EPA December 1, 2025.

After the submission of the CCAP, the CPRG team will monitor progress and updates to GHG measures and seek to identify new GHG measures across the state. These updates may be included in the 2027 NCDEQ Progress Report (due mid 2027).

1.6.2 Contract for Guaranteed Energy Savings

Status: Contract under review by USI of the SEO.

The Department of Adult Corrections (DAC) submitted a plan to USI to enter into a Guaranteed Energy Savings Performance Contract for Central Prison. This project is anticipated to include lighting improvements, water management measures, building automation upgrades, HVAC system upgrades, and building envelope enhancements at Central Prison, along with solar installations at several DAC sites across North Carolina. The contract is expected to generate more than \$15 million in energy savings over the life of the project, contributing to progress toward Executive Order 246’s goal of reducing energy use in state-owned facilities 50 percent by 2030. While the project is expected to close in 2026, this timeline cannot yet be guaranteed.

1.6.3 Support Local Government Recycling Programs

Status: Ongoing

Expected Completion Date: Ongoing

The Division of Environmental Assistance and Customer Service's (DEACS) Recycling and Materials Management Section (RMMS) staff provides technical assistance, education and outreach, and financial support through grants focused on maintaining and expanding local government recycling programs. DEQ awarded 12 local governments a total of \$339,400 to improve recycling efforts across the state during the 2025 Community Waste Reduction and Recycling grant round. These projects are expected to divert an estimated 478 tons of material from landfills equating to reducing carbon dioxide emissions by 1,355 metric tons, according to the EPA WARM Model.

In addition to managing current grants and planning for future grant opportunities, staff will continue to provide technical and outreach services to all municipalities and counties to support recycling and waste diversion efforts. In FY2023-24, local government programs recycled 385,545 tons of traditional household recyclables, resulting in the reduction of 1,045,819 metric tons of carbon dioxide-equivalent emissions according to the EPA WARM Model.

1.6.4 Promote a Circular Economy

Status: Ongoing

Expected Completion Date: Ongoing

RMMS staff continues to provide technical assistance, outreach, and financial support through grants focused on developing North Carolina recycling businesses and infrastructure. During the 2025 grant cycle, DEQ awarded grants to nine recycling businesses, resulting in a total investment of nearly \$950,000 in recycling infrastructure in the state. The funded projects will also create an estimated 30 jobs and divert 20,000 tons of material from landfills per year, reducing carbon dioxide emissions by 23,325 metric tons per year, according to the EPA WARM Model.

DEQ staff continues to research and promote reuse and recycling markets for renewable energy technologies including solar panels, electric vehicles, and utility storage batteries. One 2025 grant project was awarded to a solar panel recycler in the state to add a second dedicated solar panel recycling line to expand capacity and accept a wider range of panels.

In addition to managing development grants, DEQ continued engagement with the Secretary's North Carolina Circular Economy Council (CEC), consisting of businesses engaging in the circular economy. Established in 2023, the CEC will continue to meet to find and establish opportunities to promote the circular economy state-wide.

1.6.5 Provide Technical Assistance on Reducing Energy Consumption and Minimizing Carbon Footprints to NC Organizations

Status: Ongoing

Expected Completion Date: Ongoing

DEQ's Waste Reduction Partner (WRP) program uses its unique team of retired engineers to provide no-cost, on-site energy efficiency assessments and clean energy assistance to businesses and institutions across NC. For FY25, WRP provided 54 energy assessments, saving organizations a projected \$2.7 million in utility costs with a predicted carbon emission reduction of 10,126 metric tons of CO₂e annually. WRP also developed a Carbon Accounting Toolkit which will help facilities navigate, measure, and report scope 1, 2, and 3 GHG emissions.

1.6.6 Reduce Food Waste

Status: Ongoing

Expected Completion Date: Ongoing

DEQ expanded the Use the Food NC campaign by developing a food storage social media toolkit and a Self-Assessment Guide for North Carolina Businesses. The guide provides checklists specific to restaurants, caterers, dining halls, food manufacturers, grocery stores and food distributors. It also highlights successful stories across the state and provides general information on food donation and animal feeding. DEQ continued to offer the competitive Food Waste Reduction (FWR) grant open to communities, businesses, and nonprofit organizations and awarded a total of \$400,000 to 13 entities to expand food waste reduction and recovery infrastructure. These projects are projected to recover and redistribute nearly 1.2 million meals and divert approximately 4,784 tons of food waste from landfills, reducing carbon dioxide emissions by 3,932 metric tons, according to the EPA WARM Model.

Staff will continue to develop materials and host events focused on food recovery and donation, manage and award FWR grants, and improve waste reduction strategies in state and regional entities. Staff will also publish a comprehensive organics report, entailing the status of food waste efforts in North Carolina.

1.6.7 Support Environmental Stewardship Initiative Members

Status: Ongoing

Expected Completion Date: Ongoing

ESI is committed to helping ESI members achieve their sustainability endeavors through mentoring, networking, and training events. ESI members strive to establish environmental management systems and achieve water, energy, and hazardous waste reduction goals. ESI members are a diverse group that includes businesses, industries, municipalities, and other government agencies. ESI staff provide education and outreach to members including hosting webinar series that highlight carbon emission management strategies within the industrial setting, the ESI Annual Conference, Environmental Networking/Outreach events and other educational opportunities designed to enhance sustainable business strategies.

In 2024, ESI members set 63 energy reduction goals, demonstrating a strong focus on energy efficiency and consumption reductions. Through their reduction efforts, members realized significant reductions in greenhouse gases and energy usage: 307,514 metric tons CO₂e and 1,105,455 mmbTU (million BTUs), respectively.

1.6.8. Energy Efficiency Conservation Block Grant (EECBG)

Status: Ongoing

Expected Completion Date: December 2026

The EECBG program, was initiated by the US Dept. Of Energy (DOE), with the aim to assist communities in developing and implementing energy efficiency projects. As part of the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), the SEO received funding for the purpose of supporting building energy assessments, energy audits, and facility upgrades across North Carolina. Currently, EECBG has 9 subrecipients: 7 local government entities, 1 college/university, and 1 state government agency. In total, the SEO will be awarding \$2,796,330 with the goal of improving energy efficiency at all 9 local and state government facilities. These projects will be completed through December 2026. Projects vary in scope, from upgrading a baseball stadium's lighting to installing a ground-mounted solar array at a correctional facility. These projects are estimated to save 2.2 million kWh of energy, reduce 2,667 metric tons of CO₂e, and save \$258,566 over the program's lifetime.

1.6.9. Enhance Education and Outreach Related to Climate Change

Status: Ongoing

Expected Completion Date: Ongoing

Education and outreach staff throughout the Department share air quality [educational resources](#) that aid with a) learning about climate science and the environment, b) encourage energy efficiency, and c) encourage individual actions to reduce emissions to improve our air quality. The Division of Air Quality also supports communication and outreach related to the [Greenhouse Gas Inventory](#), which is collected every two years and reported in January as required by Executive Order 80. Additionally, a workgroup of educational staff throughout the Department supports the [NC Climate Education Network](#) project to provide educational materials and support for K-12 and nonformal educators to enhance scientific aspects of the curriculum, with an emphasis on climate issues and awareness.

2.0. *Increase statewide resilience to the impacts of climate change*

2.1 Evaluate the impacts of climate change on the Department of Environmental Quality's programs and operations

2.1.1 Reassess Streamflow Statistics

Status: Underway

Expected Completion Date: End of 2025, Pending Approval of Project Report by USGS Management

Low flow statistics are key information for numerous programs including National Pollutant Discharge Elimination System (NPDES) permitting and water supply assessments. The Division of Water Resources (DWR) is working with the US Geological Survey (USGS) to update the state's low flow statistics which were last comprehensively calculated in the early 1990s. To date, historic streamflow data for North Carolina, South Carolina, Virginia, and Georgia have been compiled and processing scripts have been developed.

USGS has completed calculation of all statistics for the project and performed all exploratory analyses. They plan to develop the final regression equations and write the project report in 2025.

2.1.2 Study Hydrologic and Hydraulic Dam Capacity in Cape Fear River Basin

Status: Complete

Expected Completion Date: March 2025

This included the study of hydrologic and hydraulic (H&H) capacity of large and very large dams identified in the Neuse, Tar-Pam and Lumber River Basins. The Division of Energy, Mineral and Land Resources (DEMLR) Dam Safety Program developed H&H models to determine the differing amounts of rain that would cause over 550 large and very large dams to overtop. Dam overtopping is a sign of inadequate spillway capacity but more importantly is a characteristic of dams in stress which could lead to failure of the dam and possibly cause public health, loss of life, flooding and property impacts. The information gained in this study will allow State and Local governments to prioritize emergency response to dam threats (overtopping or failure) given limited personnel resources as well as monitor the need for dam modifications in the future.

This information will also go into the DamWatch system and employed by NC Division of Emergency Management (NCEM) and DEQ to provide real-time alerts to possible issues at dams. DEMLR plans to continue with additional studies moving into the new fiscal year upon completion of the current Probable Maximum Precipitation study, which is scheduled for completion in December 2024.

2.1.3 Develop Dam Breach Models

Status: Underway

Expected Completion Date: Ongoing

DEMLR will continue to perform and develop dam breach models of Intermediate and High Hazard dams to confirm hazard classifications and determine the impacts if failure were to occur. Breach model development is in partnership with NCDPS/NCDEM's efforts in developing dam breach models throughout the state.

Breach models are used by DEQ, NCDPS, NCDOT, local Emergency Management staff, and dam owners to identify property, lives, and infrastructure subject to impact. This information assists in the development of access and evacuation routes.

2.1.4 Administer High Hazard Dam Rehabilitation Grant (HHPD)

Status: Ongoing

Expected Completion Date: Ongoing

The DEMLR Dam Safety Program administers a FEMA grant program for the rehabilitation of High Hazard dams. This grant provided over \$12,500,000 to local government dam owners and DEQ over the last four years and an additional \$14M is expected for the upcoming year to develop plans to determine dam risk and repair needs to address deficiencies to ensure improved infrastructure, reduce risk, and increase resilience within their communities. This grant strategy targets owners of publicly owned dams to rehabilitate, repair or modify their deficient dams thus removing the increased risk and threat to downstream properties due to safety deficiencies. This is especially necessary with the changing climate impacts we are subject to.

It is DEMLR's duty to identify qualifying "at-risk" dams and to work with the owners through the repair approval process to improve safety and future resilience of these qualifying dams.

2.1.5 Develop Risk-Informed Prioritization of NC High Hazard Dams

Status: Underway

Expected Completion Date: Ongoing

The DEMLR Dam Safety Program continues to develop risk-informed Assessment Prioritization of the High Hazard Dams in North Carolina. This study assessment of over 115 dams developed a screening level risk assessment protocol for all High Hazard Dams in North Carolina. These assessments will allow our program, other state agencies including NCEM and NCDOT, local governments and dam owners to set priorities for these dams and the areas in breach inundation zones in setting repair/maintenance/ resilience plans and identifying resource needs for risk, resilience and emergency response.

This study is continuing into 2025 and beyond in order to qualify North Carolina and more of its dam owners for future FEMA grants such as the High Hazard Dam Rehabilitation (HHPD) Grant. It is also anticipated that the study process developed will be applicable to all dam hazard classifications and be used upon every dam that is inspected to improve consistency and provide updated dam condition assessments annually. Our study process here has been copied by FEMA, and we are reviewing that system this year during the HHPD Grant cycle.

2.1.6 Study Probable Maximum Precipitation

Status: Partially Completed with Other Agency Coordination Underway

Expected Completion Date: Ongoing

DEMLR is supporting NCDOT, NCORR, and NC State University in their efforts to update NOAA's Atlas 14 and develop a pilot project to use climate scenarios to establish future projected rainfall statistics. DEMLR has also worked with Applied Weather Associates to update the Probable Maximum Precipitation Model for NC. This initial project has been completed with contracts underway to increase online tool capabilities for users. These projects are resilience tools identified in the 2020 RARP as being fundamental tools to be used by all government entities, planners, developers and emergency response agencies to design, develop and build a resilient infrastructure for all public and private efforts.

2.1.7 Map and Model Landslides

Status: Underway

Expected Completion Date: Ongoing

The Landslide Mapping Program is implemented by NC Geological Survey's (NCGS) Landslide Mapping Unit in the Asheville Regional Office with contracted partners Appalachian Landslide Consultants, PLLC, and UNC-Asheville's National Environmental Modeling and Analysis Center. The NCGS updates and maintains a landslide geodatabase, and this data is accessible in a public interactive web map viewer. Preliminary landslide susceptibility modelling is complete for 22 western NC counties. The GS has implemented Unmanned Aerial Systems technology for routine use in landslide mapping and analysis. This information and response capability is and will remain important to the people of western North Carolina for planning, infrastructure, emergency response and life and property safety.

The landslide program will continue to collect landslide data and conduct landslide modeling on a county-wide basis to identify areas vulnerable to landslides, especially those triggered by excessive rainfall events and seismic activity as exemplified due to impacts from Hurricane Helene. NCGS continues to respond to requests for technical assistance on landslides from emergency managers, NCDOT, local government agencies, the private sector, and the public.

2.1.8 Design/Developer and Local Program Education Workshops – Sedimentation Program

Status: Ongoing

Expected Completion Date: Ongoing

The DEMLR Sedimentation Control Program continues the annual production of workshops for design professionals, developers, contractors, local government programs, universities, and interested parties to address a wide range of erosion and sedimentation control (E&SC) issues in North Carolina. This capability will improve resilience throughout the state on construction sites during and after construction. These workshops educate and provide technical assistance to stakeholders on topics such as innovative design, ongoing research, regulatory updates, consistency between jurisdictions, benefit-cost analysis, use of natural systems, and native vegetation.

Over the next twelve months, at least one E&SC workshop will be produced.

2.1.9 Design/Developer Education Workshops – Stormwater Program

Status: Ongoing

Expected Completion Date: Ongoing

The DEMLR Stormwater Program continues to produce monthly workshops for design professionals, developers, contractors, local governments, universities, and interested parties to address wide ranging stormwater quality and control issues in multiple programs which include Post-Construction, NPDES Construction, NPDES Industrial, Water Supply-Watershed and MS4 components of the agency. This capability will improve resilience and impacts to water quality throughout the state on development and re-development sites. These workshops, held monthly, educate and provide technical assistance to all stakeholders on topics such as updates in innovative design, ongoing research, regulatory updates, consistency between jurisdictions, benefit-cost analysis, and use of natural systems.

Over the next twelve months, monthly stormwater program workshops will be produced.

2.1.10 Albemarle-Pamlico National Estuary Partnership (APNEP) Air Resources Monitoring & Assessment Team (AR-MAT)

Status: Underway

Expected Completion Date: Ongoing

The APNEP AR-MAT includes two working groups (chemical deposition and climate) who are developing monitoring and assessment strategies for their respective indicator metrics, all within the Albemarle-Pamlico region. The chemical deposition group has developed their initial APNEP metric (assessment) report on “total nitrogen deposition”, and the climate group is completing their initial metric report on “annual and seasonal series of daily precipitation maxima”, the latter to be assessed at two scales: region/basin-wide and individual basins or sub-basins. Both working groups will be contributing to an Air Resources monitoring strategy during fall 2023.

2.2 Integrate climate change adaptation practices and resiliency planning into Department of Environmental Quality’s policies and operations

2.2.1 Implement 2021 Coastal Habitat Protection Plan (CHPP) Amendment

Status: Ongoing

Expected Completion Date: Ongoing

DMF staff, in conjunction with APNEP and other DEQ divisions, are continuing to work to implement recommendations from the 2021 CHPP Amendment to address water quality impacts on SAV due to changes in salinity, water temperature, and water clarity; wetland loss due to sea level rise and development impacts (e.g., wetland migration, fisheries, water quality, stormwater buffering capacity); water quality impacts from inflow and infiltration associated with wastewater infrastructure; and water quality degradation due to nonpoint source pollution from environmental rule compliance. This includes the formation of a private public partnership for further community engagement.

In the next 12 months, DMF will work with APNEP to hold multiple CHPP Team and CHPP Steering Committee meetings. DMF will also continue working with other agencies and organizations to incorporate the recommendations from the Amendment into existing and future programs/efforts.

2.2.2 Develop and Implement CHPP Outreach Plan

Status: Ongoing

Expected Completion Date: Ongoing

The CHPP team of DMF was fully staffed by spring of 2025—however, the CHPP Coordinator position with APNEP, responsible among other duties for CHPP outreach and engagement with stakeholders, was lost as a part of legislative budget reductions. The CHPP team has continued working with the private-public partnership to address water quality at the EMC, and with additional partners on salt marsh and oyster habitat protection efforts. The CHPP team has also coordinated with Department and external partners to prepare for the 2026 CHPP Amendment.

In the next 12 months the CHPP team will lead meetings, workshops, and writing of the 2026 CHPP Amendment, which is expected to include a chapter on community engagement for habitat protection.

2.2.3 Develop Database for Restoration and Water Quality Trend Evaluation

Status: Databases are Near Completion; Minor edits to Schemas Pending
Expected Completion Date: June 2026

The development of a geodatabase and paired SQL database was initiated prior to the implementation of statewide climate change actions, and the Division of Mitigation Services (DMS) has been updating the schema to reflect the additional requirements since 2021. The paired databases will function to track and evaluate project performance and the potential effects of climate change. These evaluations will also allow DMS to more easily analyze data to identify anomalies and trends, allowing the division to implement data-driven corrections readily and accurately.

The DMS data team was formed in 2019. During 2020 and 2021, the team completed the integration between the geodatabase, the SQL database, and the financial database (i.e., Customer Relationship Management). The next step will include creating and populating data tables and maps targeted explicitly for water quality analysis and tracking. An NC Department of Information Technology embedded staff member started December 2023 to help with system architecture. A permanent position was hired in August 2025 to facilitate the database (s) schema edits.

2.2.4 Implement DMF Headquarters Campus Resilience Plan Project

Status: Ongoing
Expected Completion Date: Ongoing

DMF received funding from the National Fish and Wildlife Foundation (NFWF) to hire engineers to plan the “DMF HQ Campus Resilience Plan” to enable permitting and follow-up submission to NFWF for funding of the permitting and construction of the plan. Due to staff vacancies and increased litigation towards the Shellfish Lease and Aquaculture Program, the engineering and permitting could not be accomplished. DMF decided to return the funds to NFWF and reapply when the work could be accomplished in subsequent years.

2.2.5 Develop Wastewater Assessment Training Program

Status: Ongoing

Expected Completion Date: December 2024

DMF continues to pursue improved assessment of the impacts of wastewater treatment plant failures on surrounding shellfish harvesting and recreational swimming areas through a Wastewater Assessment Training Program. DMF will develop protocols for integrating its drone fleet into pollution source assessments to provide improved data collection and more effective visual representation of impacts for public education purposes.

Staff completed a training in September 2024 with the FDA engineering team regarding hydrographic study design and implementation. The training occurred at the Carolina Beach Wastewater Treatment Plant (WWTP) with the purpose being to introduce new staff to hydrographic study design and procedures using new technologies such as proprietary software and drone use. Staff will continue to work with FDA to analyze the data from the study, and finish development of an SOP that will be used to implement independent hydrographic studies in the future.

2.2.6. Address Stormwater Impacts on Shellfish Growing Areas

Status: Ongoing

Expected Completion Date: Ongoing

DMF continued collaborative projects with federal and academic partners to further management plans. This continued to enhance DMF's ability to address potential public health impacts of increased stormwater runoff through research and development of updated shellfish growing area management plans.

Staff have collaborated with Academic partners on two NASA grant proposals where the goal is to use satellite and salinity data to enhance understanding of shellfish growing area water quality and recreational water quality in NC related to stormwater impacts.

2.2.7. Continue Coastal Habitat Restoration in Pamlico Sound

Status: Complete

Expected Completion Date: Fall 2024

DMF completed oyster restorations at two newly sited sanctuaries—Brant Island Shoal Oyster Sanctuary and Maw Point Oyster Sanctuary in Pamlico Sound (46.58 total acres built with 50,000 tons of material)—and at cultch sites throughout the state (55.38 total acres built with 367,357 bushels of material). These oyster reefs function to help offset habitat loss and water quality degradation expected from climate change, increase ecosystem and community resilience, and improve water quality. DMF continues maintaining and restoring oyster reefs that increase coastal resiliency by helping protect critical wetlands and other coastal habitats while providing other beneficial ecosystem services.

In the next 12 months, DMF will finish the final oyster sanctuary deployments under the \$15 million grant from NOAA, in partnership with the North Carolina Coastal Federation. DMF will also continue to construct cultch sites to provide habitat and alternative harvest areas for the commercial oyster fishery.

2.2.8. Implement Fisheries Management Resilience Strategies

Status: Ongoing

Expected Completion Date: Ongoing

DMF prepares fishery management plans (FMPs) for adoption by the NC Marine Fisheries Commission for all commercially and recreationally significant species or fisheries that comprise state marine or estuarine resources. In 2025 the Commission gave final approval to Amendment 1 of the Spotted Seatrout FMP, Amendment 3 of the Hard Clam FMP, and Amendment 5 of the Eastern Oyster FMP—the latter of which provides additional cultch planting to supplement oyster harvest while closing off important natural oyster reefs in deep waters of the Pamlico Sound. Climate change increases the variability of ecosystem factors by impacting the distribution, abundance, and productivity of fish populations and resulting management. DMF addresses climate change impacts as fishery management opportunities through the development of fishery management strategies that are flexible and support easier entry and exit into new fisheries and out of those that are declining to prevent overfishing.

DMF continues to support interstate and federal cooperative management, stock assessments, and fishery management plan guidelines by incorporating climate change in vision statements and/or strategic plans and fishery management plans.

2.2.9. Create Resiliency for DEQ Locations During Power Interruptions

Status: Ongoing

Expected Completion Date: Spring, 2024

Information Technology (IT) has identified networking and computing equipment that do not have a battery back-up. These batteries are commonly referred to as Uninterruptable Power Sources (UPS) and are meant to provide key equipment with power during a power outage of 30 minutes or less. This can keep key equipment powered on for a seamless transition to a back-up power source with minimal loss to operations or data.

IT has purchased and installed approximately 95 percent of identified assets. IT added additional equipment for this effort and purchasing and installing additional UPS units.

2.2.10. Coordinate Water Resources Rules Revisions That Support EO80

Status: Planned

Expected Completion Date: Ongoing

DWR Planning staff held a number of meetings with NC State University stormwater researchers and subject matter expert practitioners over the last year on revising stormwater post-construction control standards to incorporate projected climate change effects on rainfall to better protect receiving streams. Draft stormwater rules will address new development post-construction standards as well as existing development stormwater runoff, providing flexibility to local governments to implement multi-benefit practices that help with flooding, carbon storage, ecosystem enhancement and community needs in addition to nutrient loading.

DWR intends to complete draft stormwater rules content for public review for High Rock Lake watershed by November 2024. Similar rules for Jordan and Falls Lakes will follow in 2025.

2.2.11 Incorporate Information About Climate Resiliency into the Cape Fear River Basinwide Water Resources Management Plan (Basin Plan)

Status: Underway

Expected Completion Date: Spring/Summer 2026

Basin plans report on changes and impacts to surface and ground water resources on a watershed and river basin scale. They identify areas that may be impacted by point and nonpoint sources of pollution, provide recommendations for reducing impacts to water quality and quantity, and recognize nature-based solutions as ways to reduce impacts to our natural resources and build resiliency. While developing the Cape Fear River basin plan, basin planners worked with the Cape Fear River Assembly to develop and distribute a survey to communities who do not typically engage in the planning process. The survey asked respondents to identify their concerns within the river basin as it relates to protecting and managing water resources within their community. In the Broad River basin, basin planners met with riverkeepers and local resource agencies to understand and identify concerns within the basin. When appropriate, information gathered from the survey and conversations with local watershed groups will be incorporated into the basin plans.

Over the next 12 months, basin planners will be completing the Cape Fear River and Broad River basin plans. Once a draft is complete, the basin plans will be available for public comment before it is presented to the Environmental Management Commission.

2.2.12 Incorporate Climate Resiliency into Watershed Action Plans

Status: Ongoing

Expected Completion Date: Ongoing

Watershed action plans (WAP) are dynamic and focused on identifying project areas, prioritizing projects, developing implementation plans, and tracking water resource improvements. They take into account underserved communities, education needs, technical capacity, and funding sources and opportunities. All restoration and protection projects in Walnut Creek WAP area should include components for carbon sequestration and resilient communities. The Watershed Restoration Improvement Team is constantly refining online tools, identifying what questions need to be asked and answered, and how best to engage with underserved communities or communities that typically don't participate in planning processes to protect natural resources. As new tools are developed or updated, they are made available online on DWR's Watershed Action Plans webpage under Water Education Programs.

Over the next twelve months, we will continue to develop watershed specific objectives with local governments and community members for each strategy.

2.2.13 Streamline Approvals for Temporary Disaster Debris Sites

Status: Complete

Expected Completion Date: March 2025

The Division of Waste Management (DWM) developed an online Laserfiche forms process to streamline approvals for temporary disaster debris sites as a part of the response efforts for Hurricane Helene. DWM will continue to work with local, state, and federal partners to participate in and conduct training, and to provide guidance via division webpages. DWM field staff have continued to work with local governments on an individual basis to establish new disaster debris sites.

2.2.14. Update APNEP Comprehensive Conservation and Management Plan (CCMP)

Status: Underway

Expected Completion Date: 2024

APNEP continued strategic planning with its Leadership Council and Management Conference members to update its 2021-2022 CCMP. Consideration of climate actions are front and center when assessing actions needed to identify, protect, and restore the significant resources of the Albemarle-Pamlico region. APNEP has been working to ensure integration of recent actions recommended in the N.C. Climate Risk and Resilience Plan and Natural and Working Lands Action Plan, Virginia Coastal Resilience Master Plan, and numerous other regional resilience and related conservation plans into the CCMP Update. Community Resilience is one of five themes that have been identified as a focus area for the next five years for the updated 2023 CCMP, along with Water Quality, Submerged Aquatic Vegetation, Coastal Wetlands, and Oyster Habitats.

APNEP also spent significant time developing an initial Two-Year Bipartisan Infrastructure Law Workplan (submitted to EPA October 2022) and new Bipartisan Infrastructure Law Long Term Workplan and Equity Strategy which was submitted to EPA June 2023. The workplan and strategy are designed to accelerate CCMP implementation which includes Community Resilience as a focus area as described above. APNEP is also coordinating with NCORR to identify opportunities to utilize the BIL funding to assist with implementation of projects identified during the Regions Innovating for Strong Economies & Environment (RISE) program.

2.2.15. Track and Respond to Severe Weather Events

Status: Ongoing

Expected Completion Date: Ongoing

Meteorologists in the Division of Air Quality track severe weather events and provide forecasting expertise to inform management decisions on timing for implementing actions to protect staff and equipment. The Department also coordinates with other state, local, and federal agencies to support emergency actions, as needed.

The Department will continue to review and improve communications tools in collaboration with other state, local, and federal agencies.

2.2.16. Provide Updated Stormwater Control Measure Recommendations

Status: Underway

Expected Completion Date: Ongoing

During 2024, DWR Nonpoint Source Planning staff obtained from NC State Biological and Agricultural Engineering an analysis and technical proposal providing draft safety factors for increasing the sizing of Stormwater Control Measures throughout the Coastal Plain, varying by location, based on storm size increases determined from the most recent 20-25 years of rainfall records. Staff intend to disseminate these recommendations for 319 grant applicants to begin considering for use as applicable as early as the next round of competitive proposals in 2025. In addition, in 2024-25, Nonpoint Source Branch staff will explore the potential for broadening this analysis across the Piedmont and will also work with the DEMLR Stormwater program to evaluate the potential for using these analyses for adjustments to stormwater regulatory requirements in upcoming rules readoptions.

2.3. Assist the communities served by Department of Environmental Quality to implement climate change adaptation practices and resiliency planning

2.3.1 Utilize Infrastructure Funding to Support Projects that Improve Resiliency

Status: Underway

Expected Completion Date: Ongoing

In Fall 2023 and Spring 2024 water and wastewater infrastructure funding rounds, the State Water Infrastructure Authority (SWIA) awarded \$245,555,744 in funding to support 27 applications that addressed resiliency. Examples include stormwater, water, and wastewater projects to move treatment plants above floodplains, reduce flooding, installing bioretention cells, rehab lift stations, and add backup power generation or other action to improve continuity of service during storm events.

The Division of Water Infrastructure will continue to recommend funding awards that include projects supporting resiliency to SWIA for biannual funding rounds.

With new SRF funding (close to \$700M) from the EPA for drinking water, wastewater, and decentralized wastewater projects to help rebuild and recover Western NC after the devastating impacts of Hurricane Helene, The Division of Water Infrastructure began developing plans for the new funding programs. The two primary known aspects of the new EPA funding included: being impacted by Hurricane Helene and requiring that resiliency be a component of any project considered for funding. The Division began soliciting project needs from impacted areas. The Division held several in-person workshops about the anticipated funding in 4 Western NC locations. Staff prepared a draft Intended Use Plan and Priority Rating System that was reviewed and approved by the State Water Infrastructure Authority and were subsequently set out for public comment. The first awards for projects will occur in September 2025, outside the scope of this reporting period.

2.3.2 Implement Phases 1 & 2 of Resilient Coastal Communities Program (Round 1)

Status: Complete

In partnership with NCORR and others, DCM created the RCCP to improve the capacity of local governments to plan and prepare for intensifying climate-driven hazards. The RCCP incentivizes communities to meet defined standards for long-term planning, preparedness, and community engagement. It helps them plan shovel-ready projects to capitalize on federal and state funding opportunities, some of which are available through the latter phases of the RCCP itself. From 2020 to 2022, 26 communities received funding to complete Phase 1 (Community Engagement and Risk & Vulnerability Assessment) and Phase 2 (Planning, Project Selection, and Prioritization) of the program. They created resilience strategies comprised of community-specific goals, community engagement strategies, risk and vulnerability assessments, and a portfolio of prioritized resilience projects. In its first round, the RCCP program awarded

26 communities (8 counties and 18 municipalities) funding for Phases 1 & 2, totaling \$775,000.

The RCCP incorporates environmental justice and equity considerations throughout its four phases, requiring communities to engage with and assess the vulnerability of their most disadvantaged populations and identify the best strategies to assist them. For example, the RCCP asks each community and its contractor(s) to identify and evaluate social vulnerability by implementing a risk and vulnerability assessment and using the results to identify and prioritize projects incorporating DEIJ principles. Additionally, one of the criteria for community applications was their economic Tier status, thus enabling the program to prioritize Tier 1/lower-capacity communities.

2.3.3 Implement Phases 3 & 4 of RCCP (Round 1)

Status: Underway

Expected Completion Date: August, 2024

Phase 3:

DCM began Phase 3 (Engineering and Design) of the RCCP in March of 2022 to improve local communities' resilience to climate-driven hazards. To be eligible for Phase 3, communities must have completed Phases 1 and 2 through the RCCP or the equivalent, as determined by DCM staff. For the 26 communities enrolled in the RCCP, which completed Phases 1 and 2, competitive grant funding was made available by the North Carolina General Assembly (NCGA) and the National Fish and Wildlife Foundation (NFWF).

By July 13th, 2022, DCM selected 20 projects representing 23 communities to move into Phase 3 and awarded \$1.14 million in grant funding. Most of those projects included a natural or nature-based component. DCM initially planned for Phase 3 to last six months, with contracts ending in May 2023; however, some communities needed more time to finalize their engineering and design plans, extending the completion date to September 2023. Importantly, Phase 3 grant extensions do not preclude those communities from applying for Phase 4 funding, so long as their Phase 3 engineering and design plans show adequate progress toward completion.

All 20 Phase 3 projects awarded in 2022 are now complete.

Phase 4:

Once the communities showed they were close to completing Phase 3, DCM released Phase 4 applications in March of 2023. In response, DCM received 18 applications from communities that had either completed Phases 1-3, were close to completing Phase 3, or met the substitution requirements therein. From those applications, DCM selected 5 projects to move forward and awarded \$1.16 million in grant funding. DCM expects Phase 4 to conclude in August 2024.

DCM expects Phase 4 and the second round of Phases 1 and 2 to run concurrently.

All five projects awarded in 2023 funding are now complete.

2.3.4 Implement Phases 1 & 2 of RCCP (Round 2)

Status: Complete

Expected Completion Date: November 2024

In January 2023, the Division of Coastal Management (DCM) launched the second round of the Resilient Coastal Communities Program (RCCP) with requests for community and contractor applications. DCM received 15 community applications representing 3 counties and 12 municipalities, along with 11 applications from third-party contractors. All 15 communities were selected to participate in Phases 1 and 2 of the 2023–2024 program cycle.

DCM selected 8 contractors to provide direct technical assistance, matching them with communities based on preference, geographic location, and relevant expertise. The Division awarded \$1.08 million in grant funding to these contractors to support completion of Phases 1 and 2. All 15 communities have successfully completed Phases 1 and 2 and have received their finalized Resilience Strategies and Project Portfolios.

2.3.5. Implement Phases 1 & 2 of RCCP (Round 3)

Status: Underway

Expected Completion Date: November 2026

In April 2025, the Division of Coastal Management (DCM) launched the third round of Phases 1 and 2 of the Resilient Coastal Communities Program (RCCP). The Division received \$1.9 million from the National Fish and Wildlife Foundation to support this round and to pilot the integration of resilience planning into Coastal Area Management Act (CAMA) Land Use Plans.

DCM received 21 community applications representing 8 counties and 13 municipalities, as well as 21 applications from third-party contractors. Nineteen communities were selected to participate in Phases 1 and 2, and 13 contractors were selected to provide direct technical assistance. The Division awarded \$1.14 million in grant funding to the contractors to support this work. Implementation is now underway, with all projects expected to be completed by November 2026.

2.3.6. Expand Phase 2 of the RCCP to Improve Efficiency, Effectiveness and Equity in Final Design & Permitting

Status: Underway

Expected Completion Date: February 2027

Phase 2 of the Resilient Coastal Communities Program (RCCP) guides communities through a project prioritization process using multi-factor criteria to identify and advance the most impactful resilience projects. While this process supports informed decision-making, the analysis framework was not originally designed to comprehensively evaluate project alternatives. As a result, some communities risk selecting projects that may be less efficient, effective, or equitable, or that underutilize nature-based solutions.

To address this gap, the Division of Coastal Management (DCM) was awarded \$3.1 million from the National Fish and Wildlife Foundation's (NFWF) National Coastal Resilience Fund to expand the RCCP by providing technical assistance for final engineering and design. This funding specifically supports underserved communities in advancing prioritized projects toward shovel-readiness in a more efficient, effective, and equitable manner.

In July 2024, DCM awarded 15 communities Phase 3 (Engineering & Design) funding totaling \$4,310,350. Funded projects include a range of resilience efforts, such as green stormwater infrastructure and living shoreline designs. Each project will result in 90% complete engineered and designed plans that are ready for permitting and construction, bringing communities one step closer to implementation.

Of the 15 projects, 7 are funded directly through the NFWF grant, with the remaining projects supported through state appropriations. Burgaw and Aulander have completed their projects, and the remaining communities are expected to complete their work by February 2027.

2.3.7. Support DMS Natural Infrastructure Flood Mitigation Program (NIFMP)

Status: Underway

Expected Completion Date: Ongoing

In accordance with G.S. 143-214.11A, DMS is developing the NIFMP. Development of a strategic plan to act as a roadmap to NIFM program implementation was completed August 2024. Modeling to quantify the effect of compensatory mitigation practices for flood mitigation was completed January 2024. An assessment tool for estimating project proposals has been developed and is in the testing phase.

DMS approved the first Stoney Creek pilot project conceptual plan submitted by the contractor (Ecosystem Planning & Restoration – EPR) in 2024. This plan included project site, watershed modeling, and monitoring approaches. EPR secured Memorandums of Understanding with landowners within the watershed, allowing EPR and the landowner to work together to explore potential projects on the property. The first pilot project in Stoney Creek took place on the Wayne Community College campus and consisted of a stormwater wetland basin with a footprint of approximately 9.6 acres. Based on the design, the depth from the top elevation to the bottom of the bottom basin elevation is 10 feet. And it is designed to capture 175,338 Cubic Feet of stormwater runoff. The project began in March 2025 and was completed in September 2025. A kickoff event at the college took place in March 2025.

The second pilot project is currently underway. A mitigation plan, design and scope of work from EPR is expected in December 2025.

Additional project coordination with stakeholders and local landowners is ongoing.

2.3.8. Fund Stream Restoration Projects

Status: Ongoing

Expected Completion Date: Ongoing

The Division of Water Resources funds projects to restore degraded streams across North Carolina. Restoration improves resiliency by restoring a stream or river's ability to reduce stormwater flow and downstream flooding. It can also decrease instream temperatures and improve water quality by reducing pollutant loading reaching larger water bodies.

Approximately \$3,530,501 million dollars in DWR grant-administered funds were used to match a total of \$11,371,477 million dollars for 22 projects completed in FY 2023-2024. An additional \$5,603,092 million dollars in DWR grant-administered funds were used to match a total of \$19,271,592 million dollars for projects planned or under construction during this same period.

2.3.9. Disseminate Outreach and Guidance Related to Approval, Operation, and Closure of Temporary Disaster Debris Sites

Status: Complete

Expected Completion Date: March 2025

DWM updated the website to address broken and outdated links as a part of the response for Hurricane Helene. The Division will continue to work with local governments on an individual basis to establish, activate, and close temporary sites for managing disaster debris from extreme weather events such as Hurricane Helene as needed under normal business functions.

2.3.10. Improve Recycling and Reuse Strategies for Disaster Debris

Status: Underway

Expected Completion Date: Ongoing

Work will continue with local, state, and federal entities, and waste and recycling facilities to improve and/or develop and implement strategies that promote the proper management of storm debris and its impacts to statewide communities. Strategies include increasing waste segregation efforts that facilitate reuse, recycling, and proper disposal of the various waste streams; expediting the removal of disaster-related waste from impacted communities; maximizing reuse and recycling opportunities available to impacted communities; growing waste reduction programs to maintain landfill capacity to withstand periodic influx of storm related debris; promoting local ordinances in building practices that eliminate exposure risks resulting in less waste being generated during storm events; and working with public and private waste management facilities to ensure their acceptance of disaster-related waste.

These actions were incorporated into the 2024-2034 Solid Waste and Materials Management Plan, and strategies will be developed and implemented by DWM and DEACS programs. DWM and DEACS secured funding from EPA through the Resource Conservation and Recovery Act (RCRA) for Hurricane Helene Recovery in 2025 to administer grants, develop resources, and provide grants for local governments to replace or improve recycling infrastructure damaged by the storm, build resilient convenience centers and transfer stations and coordinate recycling/HHW workshops.

2.3.11. Maintain Local Government Debris Management Planning

Status: Planned

Expected Completion Date: TBD

While many local governments have debris management plans in place, the efforts are primarily voluntary in nature. A recommendation would be for a statutory requirement that all city and county governments, either individually or jointly in resolution with one another, be required to develop and maintain a debris management plan as part of their Emergency Operations Plan. This would also assist in their compliance with existing Statute 130A-309.09A for solid waste planning purposes, which includes debris management.

Consideration of this action was incorporated into the 2024-2034 Solid Waste and Materials Management Plan.

2.3.12. Provide Outreach and Guidance Related to Spill Prevention from Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs)

Status: Ongoing

Expected Completion Date: Ongoing

DWM will participate in and conduct training and provide current guidance on Division webpages to prevent releases of petroleum to the environment. To improve and/or implement strategies to properly manage petroleum storage, we have been engaged in the following: attend training events and Area Contingency Plan meetings with US Coast Guard; collaborate with EPA, NCEM, DWR, and DAQ to improve notification and response time to spills reported to the National Response Center and/or NCEM; and identify unpermitted petroleum ASTs, focusing within flood zones, but including all of North Carolina facilities, in an outreach program consisting of awareness and preparation prior to hurricane season.

DWM will continue to work with local, state, and federal partners to prevent spills from aboveground and underground storage tanks.

2.3.13. Continue State and Local Partnerships

Status: Ongoing

Expected Completion Date: Ongoing

DWM will continue to collaborate with County Emergency Management Coordinators and Local Emergency Planning Committee through meetings and listening sessions to identify areas where DEQ/DWM and counties can create partnerships and assist in training.

2.3.14. Natural Disaster Response Team

Status: Ongoing

Expected Completion Date: Ongoing

In June 2025, DWM submitted applications for federal grants from the US Environmental Protection Agency under the authority of the American Relief Act of 2025, to provide funding to DWM and DEACS for solid and hazardous waste and materials management activities and the leaking underground storage tank program for expenses related to Hurricanes Helene. The grants were awarded as of August 2025. In addition to recovery from Hurricane Helene, some of the grant funds can be used for hiring additional staff, conducting training and workshops, and purchasing equipment to assist DEQ and local governments with planning and resiliency efforts for future storm events. The purpose is to ensure the safe, timely, and efficient management of disaster-generated waste, protect public health and the environment, and support community recovery following natural disasters such as hurricanes, floods, and tornadoes.

In 2025-26, DWM and DEACS will conduct outreach to local governments and other stakeholders for awareness of the grant funding subaward opportunities, begin the hiring process for new staff, purchase equipment, issue subawards, and begin planning resiliency training and workshop events. DWM will also continue to look for other opportunities to apply for grants/state funding for purchasing additional response equipment, and for cleanup of petroleum spills from any source caused by natural disasters in the future.

2.3.15. Mitigate Erosion Through Beach Planning

Status: Complete

Expected Completion Date: June 2023

To mitigate the impacts of erosion and sedimentation, DCM worked with the Coastal Resources Commission and adopted rules that encourage and incentivize long-term beach planning, development siting, and beneficial use of dredged material. DCM released a Request for Proposal under the planning grant management program which provides funding for communities to develop beach management plans and water management projects in accordance with 15A NCAC 07J.1200; and local ordinances covering estuarine and navigable waters. The Division awarded \$117,750 to six communities and engaged with the Army Corps of Engineers, NOAA, the Bureau of Ocean Energy Management, and other agencies to identify sources of sand for beach nourishment, and strategies for managing the sand for maximum benefit.

2.3.16. Incorporate Resilience into Land Use Planning

Status: Underway

Expected Completion Date: Ongoing

DCM has completed a Land Use Planning Guide for Coastal Communities. Land use plans include a collection of policies and maps that serves as a community's blueprint for growth. These plans are a fundamental element of coastal management in North Carolina and resilience planning is a key component of this process. With specific guidance from DCM, communities working towards new land use plans can better incorporate disaster recovery and resiliency, hazard mitigation, environmental sustainability, and diversity and equity.

Additionally, DCM was awarded \$1.9M from NFWF's National Coastal Resilience Fund to simultaneously fund two contributions to the RCCP. First, DCM will complete a third round of Resiliency Planning (PH. 1 &2), generating new insights into coastal resilience for participating communities (See 2.3.3). Second, the Division awarded \$540K to three communities (Pamlico County, Elizabeth City, and Hyde County) to integrate the outcomes of their RCCP Resilience Strategies and Project Portfolios, into updated CAMA (Coastal Area Management Act) Land Use Plans (LUPs). In doing so, this pilot project will not only provide an opportunity for communities to formalize resilience into their planning frameworks but also enable DCM to merge the RCCP with existing land use planning guidance, resources, and personnel, which currently exist as separate initiatives housed in the same department. Including resilience in LUPs is the logical next step to bridge the gap between the outcomes of RCCP and the future of the CAMA Land Use Planning process. This integration will lead to resilient policies that reflect a forward-thinking approach to coastal hazard mitigation, economic and social stability, and environmental sustainability.

2.3.17. Rachel Carson NERR Habitat Resilience Plan

Status: Underway

Expected Completion Date: Ongoing (Plan is complete, next steps are ongoing)

The Coastal Reserve finalized and published a habitat resilience plan for the Rachel Carson Reserve; the plan and related data and information are available on the [Rachel Carson Reserve Resilience Hub](#). The plan was developed using a collaborative process, includes a strategic plan and identifies and prioritizes specific areas for on-the-ground implementation of nature-based habitat resilience projects. Feasibility studies for two of the prioritized areas are complete. External funding applications have been submitted to support final design and construction for the Bird Shoal restoration priority. The plan was funded by the National Fish & Wildlife Foundation with match from the NC General Assembly.

This plan serves as a model for the development of habitat resilience plans for 3 additional reserve sites which are underway – Masonboro Island, Zeke’s Island, and Currituck Banks Reserves. The [Masonboro Island Reserve Resilience Hub](#) is complete which includes habitat and shoreline change analyses and the collaborative stakeholder meeting was held in April 2025 with research needs identified at the meeting published. The Zeke’s Island Reserve change analyses are complete, and the hub will be published and stakeholder meeting held in Fall 2025. Work on the Currituck Banks Reserve and writing of the plans for the three sites will occur in the next reporting period. The development of habitat resilience plans for these 3 sites is funded by NOAA Bipartisan Infrastructure Law Capacity Building funding for the NC National Estuarine Research Reserve.

2.3.18. Study Conditions at Bird Shoal

Status: Underway

Expected Completion Date: June 2024

The Reserve continues to work with N.C. State’s Biological and Agricultural Engineering Department and Kris Bass Engineering on a feasibility study to assess conditions at the Bird Shoal future project implementation site. Baseline site conditions data were gathered to include elevations, soil typing, water levels, shoreline position, and vegetation surveys.

A meeting will be held in August 2023 to review the initial feasibility study findings and begin discussions on the next steps towards developing a conceptual project plan for west Bird Shoal. By June 2024, both the feasibility study and Rachel Carson Habitat Resilience Plan will be complete.

2.3.19. Implement Phase 2 of the Tribal Coastal Resilience Connections Project

Status: Underway

Expected Completion Date: Ongoing

APNEP has directly hired a part-time coordinator to implement Phase 2 of the Tribal Coastal Resilience Connections project, which aims to build capacity to work with tribal communities in the Albemarle-Pamlico region to develop a strategy for incorporating resilience into tribal planning and community engagement processes. The Phase I Report documents engagement, partnership building, lessons learned and includes the results of the Tribal coastal adaptation plans analysis conducted by NCSU. It is anticipated to be available in fall 2023.

Phase 2 will focus on best practices for agency, university, and private “resilience practitioners” to engage with Tribal communities, targeted engagement with tribal communities in the shared waterways of the APNEP region between Virginia and North Carolina, and development of the Tribal Resilience Toolbox envisioned and recommended as a next step in Phase I. The toolbox includes the development of regional climate adaptation frameworks and geospatial mapping platforms to collect water stories and share climate threats and vulnerabilities identified by local communities. APNEP has included expansion of this project in its [Bipartisan Infrastructure Law Long-Term Strategy with Equity Strategy](#) and is actively seeking grant funding to further build capacity to implement the project.

2.3.20. Natural and Nature-Based Features Resilience Project

Status: Underway

Expected Completion Date: Fall 2023

APNEP continued to work with Wetlands Watch to develop tools and outreach materials to assist local governments in increasing the use of natural and nature-based features (NNBFs) to increase resilience of coastal communities to flooding caused by storms and extreme weather events. This project is an extension of a NOAA-funded project led by the Virginia Institute of Marine Sciences. The project team developed a spatial analysis tool for Virginia local governments released on ADAPTVA in 2021, and APNEP contracted with Wetlands Watch evaluate the tool’s applicability in North Carolina.

The project involved conducting a needs assessment of NC local governments, resilience practitioners, and groups such as the Outer Banks CRS Users Group and NCDEQ Water Resources Interagency Team and building a template resilience tool database tailored to meet identified needs. The project also includes development of outreach materials that promote the use of coastal habitats and natural infrastructure to build community and ecosystem resilience.

2.3.21. Maintain North Carolina’s online resilience resource center for local governments and community leaders

Status: Ongoing

Expected Completion Date: Ongoing

In May 2024, the State Resilience Office launched the [NC Resilience Exchange](#) on behalf of all state agencies. The site organizes state and federal resources, as well as solution guides, funding opportunities, and grant writing assistance from nonprofits and academic institutions. The Exchange helps users understand their exposure to climate change impacts, see how other communities are managing nature-based emergencies, find grants and support for accessing funding, and more.

The State Resilience Office will continue adding to and updating resources on the site. The team will also continue working one-on-one with community leaders to help them find the right resources to address their climate change risks.

This action fulfills initiatives listed in the 2020 North Carolina Climate Risk Assessment and Resilience Plan and in the 2020 North Carolina Natural and Working Lands Action Plan.

2.3.22. Support nine regions in the eastern half of the state to complete their priority climate resilience projects.

Status: Ongoing

Expected Completion Date: Ongoing

Over the past year, the State Resilience Office has continued to support nine regions in the eastern part of the state with their priority climate resilience projects through the Regions Innovating for Strong Economies and Environment (RISE) program. Many of these projects help build resilience for the populations most vulnerable to the impacts of climate change. Since the RISE program and nine Councils of Governments published their [Portfolios of Priority Projects](#) in Spring 2023, the State Resilience Office and its partners have secured funding to support 34 projects with over \$2.3 million in funding.

The RISE program supports local capacity building for long-term resilient disaster recovery, planning and implementation. The program has funding to continue working in the eastern half of the state beyond the next 12 months. The State Resilience Office continues to look for funding to expand similar efforts to RISE to North Carolina’s western communities.

2.3.23. Develop a climate resilience planning guide for local leaders.

Status: Complete

Expected Completion Date: December 2024

In December 2024, the State Resilience Office released its [Resilient Communities Planning Guide](#) for local governments and those assisting local governments.* The guide is designed to empower local and regional leaders to understand their climate vulnerabilities and develop priorities for action through a community-engaged process. The guide has two volumes: a Playbook (Volume 1) and an Idea Book (Volume 2).

The Playbook provides a framework to guide users through the process of building a team, analyzing vulnerabilities and assets, conducting community engagement, prioritizing actions, and identifying implementation steps. Additional parts of the Playbook provide instructions on identifying and assessing physical and social vulnerabilities for a more holistic risk assessment. The Idea Book provides examples of projects, programs, and policies that improve resilience across social, economic, and environmental domains.

Since this Guide's release, the State Resilience Office has shared and promoted this new resource at statewide events and conferences, as well as in a series of resilient recovery workshops for local governments hosted by FEMA and councils of government in western North Carolina. The State Resilience Office has integrated its use into the Planning for Extreme Heat Cohort and has provided training through FEMA on how to use the Guidebook in recovery planning efforts. The State Resilience Office has been working to support local governments and state agencies as they apply the guide to their planning processes.

*Note: The Resilient Communities Planning Guide was released while the State Resilience Office was located within the Department of Public Safety, Office of Recovery and Resiliency and is thus branded as such.

2.3.24. Guide communities with census tracts designed by FEMA as Community Disaster Resilience Zones on how to improve their climate resilience.

Status: Ongoing

Expected Completion Date: Ongoing

The State Resilience Office received another year of grant funding from the Geos Institute to continue implementing the Climate Ready America Southeast Navigator Network Program in North Carolina. The goal of the program is to connect [the state's FEMA-designated Community Disaster Resilience Zone \(CDRZ\) communities](#) to training, funding, capacity building, and technical support resources to advance their resilience initiatives.

Since the program launched in March 2024, State Resilience Office staff have helped North Carolina's CDRZ communities identify 80 potential resilience projects, supported implementation steps for 56 projects, held over 400 coordination meetings with communities and their partners, and helped fund over 50 projects. Technical assistance provided through the program includes everything from visiting sites with problem flooding, building new relationships to state agencies, and guiding conversations about alternative adaptation options.

During the 2024-2025 fiscal year, staff supporting the CDRZ program began coordinating long-term transformative initiatives to build comprehensive resilience. For example, the team is working with other state government programs to integrate future conditions in planning and technical assistance processes and is working with internal and external partners to evaluate methods for helping communities understand the chronic impacts of overlapping flood hazards, including coastal and riverine flooding, sea level rise, groundwater rise, land subsidence, and increased rainfall. They also helped establish the North Carolina Sustainable Wastewater Management Workgroup to advance climate-resilient wastewater solutions for unsewered areas in eastern North Carolina.

During the 2025-2026 fiscal year, the State Resilience Office will continue supporting active CDRZ communities.

2.3.25. North Carolina Coastal Resilience Community of Practice

Status: Complete

Expected Completion Date: Ongoing

Created out of the stakeholder group that worked on Executive Order 80's Climate Risk Assessment and Resilience Plan, the [NC Coastal Resilience Community of Practice](#) (CRCOP) meets virtually on a quarterly basis. The purpose of this networking group is to bring together diverse coastal stakeholders to focus on how ecosystem resilience can build local community resilience. The CRCOP doesn't necessarily have to have a "thing" to work on but will take on projects as appropriate and mutually agreed on. The group is led by Whitney Jenkins, Training Coordinator for the Coastal Reserve/Division of Coastal Management, and Stacey Feken, Policy & Engagement Manager with the Albemarle Pamlico National Estuary Partnership. CRCOP members include federal and state agency staff, local government staff, environmental consultants and non-profit organizations. Anyone working on coastal resilience in North Carolina is welcome to join. Meetings typically consist of short presentations on coastal resilience projects and programs, followed by a member roundtable where participants share updates on resilience work. The group is also occasionally used as a focus group. For example, this past year the Natural and Working Lands Action Plan staff received assistance from this group for the Plan's current update.

2.3.26. Incorporate Resilience into the Public Beach and Coastal Waterfront Access Grant Program

Status: Complete

Expected Completion Date: Fall 2024

DCM provides matching grants to local governments for projects to improve pedestrian access to the state's beaches and waterways through the Public Beach and Coastal Waterfront Access Grants Program.

In recent years, DCM strengthened the program by integrating resilience-based design and encouraging the use of nature-based features in access projects. This enhancement helps communities create access sites that are not only functional but also better able to withstand flooding and erosion.

Local examples include dune plantings at a dune crossover replacement in the Town of Nags Head, pervious parking installed at a kayak launch in the Town of Cedar Point, and the construction of a living shoreline in Beaufort County. Collectively, these projects demonstrate how the Access Grants Program is advancing more sustainable, resilient, and climate-adaptive public access infrastructure along North Carolina's coast.

2.4 Help complete initiatives in the Natural and Working Lands Action Plan and Executive Order 305, An Order to Protect and Restore North Carolina’s Critical Natural and Working Lands

2.4.1 Develop Greenhouse Gas (GHG) Inventory for Submerged Aquatic Vegetation (SAV)

Status: Complete

Expected Completion Date: January 2024

Natural and Working Lands Stakeholder Group’s Coastal Habitats Subcommittee completed a GHG inventory for submerged aquatic vegetation and subaerial wetlands in the state to be included in the updated 2024 NC GHG Inventory.

2.4.2 SAV Monitoring and Assessment

Status: Ongoing

Expected Completion Date: Ongoing

APNEP and its partners have made significant contributions towards implementing strategies including mapping and monitoring, water quality improvement and protection, and protection from physical disturbance to promote SAV resilience along the entire coast of North Carolina and southeastern Virginia. The group initially focused on monitoring trends in overall extent and density in both low- and high-salinity waterscapes and has since included metrics such as relative abundance and species presence have been included to gain a more robust tracking of SAV condition. In addition, high-salinity monitoring frequency increased from semi-decadal to biseasonal albeit for one of four subregions annually on a rotating basis.

An updated assessment report for high-salinity SAV is expected by late 2023. Current restoration efforts are focused on those SAV stressors associated with water clarity.

2.4.3 Coastal Training Program

Status: Underway

Expected Completion Date: Ongoing

DCM's Coastal Training Program continues to deliver resilience-related training to coastal decision-makers on nature-based strategies to reduce coastal hazards, barrier island development, and low-impact development basics for water quality protection. Over the past 12 months, the program offered 7 trainings that attracted 650 participants total.

The Coastal Training Program is also the project lead on a NOAA Digital Coast Connects funded project focused on equitable community engagement for the Scuppernong River water management study, which focuses on Washington and Tyrrell Counties. In partnership with APNEP, NC Sea Grant, and The Nature Conservancy, a series of educational community events will teach about local flooding issues to inform the water management study. Funded by DEQ's Water Resources Development Grant Program, the water management study aims to characterize the hydrology of the region, update water management plans, and address recurrent flooding. Additionally, the Coastal Training Program and its partners will develop an engagement strategy, which we envision will be helpful in other resilience efforts occurring in the Albemarle Pamlico region. The Digital Coast Connect project has funding through September 2024.

A living shoreline training is scheduled for September 19 in partnership with Cape Fear Realtors. Additionally, a barrier island training is scheduled for October 4 in partnership with Brunswick County Association of Realtors. Work on the Scuppernong community engagement project will continue through September 2024.

Finally, the K-12 resilience and climate change-focused curriculum was shared with educators during the Reserve's Spring/Summer 2023 programs. Educators were encouraged to use these activities in their classrooms this upcoming school year.

In addition to the initiatives listed above, the State Resilience Office contributes to the fulfillment of the Natural and Working Lands Action Plan and Executive Order 305 with the following initiatives, described under other sections of this report, as noted below. The State Resilience Office:

- Maintains the NC Resilience Exchange, an online toolbox that features resources for natural and working lands.
- Provides guidance on how nature-based solutions build community resilience.
- Helps local governments integrate resilience-building efforts into their planning documents.

2.5. Initiate other projects aimed at increasing statewide resilience to the impacts of climate change

2.5.1 Develop the Flood Resiliency Blueprint

Status: Underway

Expected Completion Date: Ongoing

The goal of North Carolina Flood Resiliency Blueprint is to provide local governments, the state, and partners with data, tools, and support to guide investments that minimize the cost and disruption of future flooding, while also strategically funding priority projects and addressing gaps in current mitigation efforts.

Phase II of the NC Flood Resiliency Blueprint focuses on developing the Blueprint Tool, a publicly accessible, GIS-enabled web application for flood planning across North Carolina. The tool provides communities and partners with data-driven flood risk assessments and helps users explore, evaluate, and prioritize flood resilience strategies. The Blueprint Tool was released in April 2025 and continues to be updated and improved.

Phase III applies the Blueprint Tool and Process to support local resilience planning and develop River Basin Action Strategies statewide. Work began in early 2025 on strategies for the Cape Fear, Lumber, Neuse, Tar-Pamlico, White Oak, and French Broad basins, with completion expected in 2026.

2.5.2 Create, Coordinate, and Lead Development of the NC Resilience Exchange

Status: Ongoing

Expected Completion Date: January 2024

DMF staff are working on a project in collaboration with DEQ and NCORR to develop the NC Resilience Exchange that will be an all-encompassing resilience resource guide for North Carolina with multiple components to help bring organizations/stakeholders together to coordinate parallel efforts to decrease redundancies. Staff have been working with NCORR and held multiple steering committee meetings in developing the wireframes and site content for the exchange. Staff have also brought upper management from DEQ and NCORR together to determine the next steps and draft an MOA.

A grant proposal was funded through the NWL US Climate Alliance Technical Assistance Fund in January 2022 to provide resources for the project. In the next 12 months, DEQ and NCORR will enter in the MOA, finish the exchange Scope of Work, identify resources to build the site, and begin construction of the site.

2.5.3 Enhance Resilience and Energy Security in North Carolina’s Vulnerable Communities

Status: Underway

Expected Completion Date: 2027

The SEO applied for and has been awarded the Preventing Outages and Enhancing the Resilience of the Electric Grid grant under the Infrastructure Investment and Jobs Act (IIJA) Grid Resilience Formula Grant Program Section 40101(d). The Grid Resilience grant provides \$9.2M annually for the next five years in funding support for the deployment of grid modernization technologies, diversification of distributed generation assets, and hardening and improving adaptivity of the transmission infrastructure to strengthen the resiliency of the electric grid against disruptions from extreme weather-related events and outages. Upon award receipt, projects will be prioritized based on enhancing resilience and adaptivity of the electric grid, benefits to customers in vulnerable and disadvantaged community locations and critical infrastructure such as emergency shelters and hospitals, with vulnerability to extreme weather-related energy disruptions.

Outreach was conducted with stakeholders and the public FY23-24, to determine community priorities. In FY 24-25, seven subawardees were selected for funding – the cities of Gastonia and Wilson, Surry-Yadkin EMC, Tideland EMC, Four County EMC and Duke Energy of the Carolinas. Representing awardees for years one and two, they will receive \$18.75M in funding and bring a match of \$27.6M. The RFP process for Year 3 is underway, with an additional \$9.2M in funding planned for dispersal.

2.5.4 Conduct Microgrid Study

Status: Complete

Expected Completion Date: September 2022

The SEO funded a pilot project for microgrids in rural, low-income communities that are underserved and disproportionately impacted by prolonged power outages caused by natural disasters. This pilot project can be leveraged by the state for mitigation planning purposes and other resilience-related efforts (*e.g., resilience toolkit, obtaining Infrastructure Investment and Jobs Act funds, etc.*) to identify potential critical sites for community resilience projects across North Carolina. The project team will coordinate with ongoing state efforts related to items such as energy storage, community solar, and energy resilience within low-income communities to maximize impacts. As an additional benefit, the Smart Electric Power Alliance conducted a microgrid feasibility study at a pre-selected site within North Carolina’s Electric Cooperative territory to pilot activities based on the statewide assessment of rural low-income communities.

2.5.5 Monitor Programmatic Water Quality in Stream and Wetland Restorations

Status: Underway

Expected Completion Date: Ongoing

Data collected and analyzed in the program will support the efficacy of water quality improvements resulting from restoration activities. The data will also be used to analyze climate change trends in water quality parameters. Automatic sampling across eleven sites began in February 2022. Several sites have been completed and several have been added. Currently, DMS has 7 sites in the monitoring phase; 5 additional sites will be installed in December 2025.

2.5.6 Educate Community Water Systems and Surface Water Systems on Risk Assessment and Emergency Response Requirements

Status: Ongoing

Expected Completion Date: Ongoing

Section 2013 of America's Water Infrastructure Act of 2018 (AWIA) requires community water systems serving greater than 3,300 people to develop or update risk assessments and emergency response plans, including for risks related to climate change. Per 15A NCAC 18C .1305 Source Water Protection Planning, public water systems in North Carolina that treat and furnish water from a surface water source are required to create and implement a Source Water Resiliency and Response Plan. Consistent and overlapping with the requirements of AWIA, the Source Water Resiliency and Response Plans require the identification of foreseeable natural emergency events and associated response strategies.

Public Water Supply Section staff worked with water systems to make them aware of the plan requirements. All public water systems submitted the required Federal and State Plans. The plans are required to be updated on a routine schedule. The Public Water Supply Section are providing outreach to water systems related to upcoming deadlines.

2.5.7 Lead Scuppernong Regional Water Management Study

Status: Underway

Expected Completion Date: 2025

At the request of the NC Division of Parks and Recreation, APNEP has been leading development of the Scuppernong Regional Water Management Study since 2018, serving as a neutral, science-based convenor of a diverse group of stakeholders and local communities to address flooding and water management issues on the northern Albemarle-Pamlico peninsula surrounding Pettigrew State Park (Lake Phelps), Pocosin Lakes National Wildlife Refuge, and Buckridge Coastal Reserve. After multiple years of delays due to contracting and capacity issues, APNEP made significant progress during the past year, working closely with the Albemarle Commission to secure funding and a technical subcontractor for a hydrologic study.

- APNEP finalized securing in-kind match from grant partners including the NC Division of Parks and Recreation, NC Division of Soil and Water Conservation, U.S. Fish and Wildlife Service, and Washington and Tyrrell Counties.
- Worked closely with the Albemarle Commission and partners to resubmit previously awarded grant application, address new questions from grant administrator, with new local government applicant and secure a new contract, while maintaining relationships with original county applicants and retaining them as partners.
- A NCDEQ Water Resources Development Grant Program engineering/feasibility study (Scuppernong Study) grant/contract was awarded to the Albemarle Commission, the Regional Council of Government in February 2023.
- Participated in the RISE planning process and ensured coordination with NCORR and ACOG. The Study was included in the project portfolio.
- Awarded funding in November 2022 from the NOAA Digital Coasts Connects Partnership and the National Estuarine Research Reserve Association. Partnered with the NC Coastal Reserve, NC Sea Grant, and The Nature Conservancy to develop a collaborative engagement strategy to ensure equitable community engagement and input from regional stakeholders to inform the Study.
- The outcomes will be utilized to build a comprehensive regional plan to address water management issues on both privately and publicly owned land, build resilience to flooding and sea level rise, support natural and working lands, and improve coordination amongst stakeholders.

Frequent coordination is occurring to shape Study and Strategy development. The first Steering Committee meeting (grant partners) was held January 5, 2023, and the first Steering Committee workshop was held May 18. Stakeholder and public engagement workshops are being planned throughout the duration of 2023. The contractor has circulated the SOW for the Study to the partners for review and input at the next meeting.

2.5.8 Develop NC Stream Watch

Status: Underway

Expected Completion Date: Ongoing

The NC Stream Watch Spring Pilot Cohort was designed and completed. NC Stream Watch continues to develop into a comprehensive educational resource to support teachers with connecting their students with the streams in and around their campus. Teachers completed the first cohort and received the new published NC Stream Watch Activity Guide, lesson materials, and engaged in active stream monitoring. Spring cohort members reported an overwhelmingly favorable experience in the program and consistently reported a new understanding and appreciation for the considerations for water resource management through their discussions and exposure to guest speakers from across the water resource landscape. The next cohort will begin in September and will connect educators across NC with the variety of water education programs offered through the Division of Water Resources.

2.5.9 Participate in Albemarle-Pamlico Federal Interagency Partnership

Status: Underway

Expected Completion Date: Ongoing

APNEP has been participating in the Albemarle-Pamlico Federal Partnership initiated by the USFWS in 2022. This effort is geared towards increasing regional coordination amongst federally funded partners to promote national attention towards the Albemarle-Pamlico region; while also seeking to leverage and maximize the benefits of the significant federal investments being directed towards the region through BIL, IRA, ARPA, and others. As part of this regional coordination and with support and encouragement from the NC Governor's office, APNEP partnered with the USFWS and the NC Office of Recovery and Resilience in July 2022 to submit a grant application through the National Fish and Wildlife Foundation America the Beautiful Challenge. Though the grant application was unsuccessful there is interest in partnering for future funding opportunities and using the framework proposed to incorporate community engagement and research support in efforts to protect and restore natural and working lands.

The AP was also recently identified by the White House Council on Environmental Quality Coastal Resilience Interagency Working Group as one of three national focus areas for shared learning across different locations at varied stages of place-based collaborative resilience planning. APNEP continues to partner with the team mentioned above and is working to submit grant applications to build upon this recent national recognition, and over three decades of similar efforts, to elevate the status of the nation's second largest estuary.

2.5.10 Support the update and modeling of NC climate impacts, local capacity building, and planning for nature-based solutions to flooding impacts.

Status: Ongoing

Expected Completion Date: Ongoing

Through its administration of the Community Development Block Grant - Mitigation program, the Department of Public Safety-Office of Recovery and Resiliency has funded several planning efforts by other state agencies that increase statewide resilience to climate change impacts. The State Resilience Office oversees some of these efforts including projects to update the state's data and modeling of climate impacts including rainfall and drought, build local capacity to design solutions to climate vulnerabilities, develop a natural infrastructure flood mitigation program, and support flood resilience planning in vulnerable communities. Through partnerships with the Department of Transportation, the State Climate Office, and the Coastal Dynamics Design Lab at North Carolina State University, the State Resilience Office within the Department of Environmental Quality continues to support these important efforts. Additionally, State Resilience Office staff serve on the advisory board for the Division of Mitigation Services work to develop natural infrastructure for flood mitigation.

2.5.11 Coordinate state agencies' annual Climate Strategy Reports.

Status: Ongoing

Expected Completion Date: Annual

The State Resilience Office facilitates an annual process for cabinet agencies to submit their resilience and greenhouse gas mitigation accomplishments to the Governor's Office and the public. These Climate Strategy Reports provide a mechanism for cabinet agencies to report on their contributions to the fulfillment of the 2020 Climate Risk Assessment and Resilience Plan and Executive Orders 80, 246, and 305.

2.5.12 Facilitate interagency communication on resilience topics projects.

Status: Ongoing

Expected Completion Date: Ongoing

The State Resilience Office 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. 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. Over the next 12 months, the IRT will continue to convene monthly.

2.5.13 Distribute a climate resilience newsletter.

Status: Ongoing

Expected Completion Date: Ongoing

Through the [Spotlight on Resilience](#), a monthly email newsletter focused on climate resilience resources, the State Resilience Office shares information about its own tools, like the NC Resilience Exchange, NC Resilient Communities Planning Guide, and the Heat Action Plan Toolkit, as well as resources developed by other organizations, funding opportunities, successful resilience projects, and resilience-related training and events. Subscribers include local governments, state agencies, and nonprofit organizations. The newsletter offers an opportunity for the State Resilience Office to share valuable information, but it also acts as a platform for other state agencies, local governments, and other resilience partners to share news and resources with a wider audience. In the next 12 months, the State Resilience Office plans to release 12 more issues of the newsletter, each with a timely resilience focus, including seasonal hazards, new resources, and forthcoming funding opportunities. The State Resilience Office will continue to promote the newsletter among local governments, academic institutions, non-profit organizations, state agencies, and others to grow its reach and expand its audience.

2.5.14 Produce a quarterly webinar series on resilience topics for local governments and their partner organizations.

Status: Ongoing

Expected Completion Date: Ongoing

In September 2024, the State Resilience Office launched a [quarterly resilience webinar series](#). The series aims to provide scientific data, resilience resources, and expert knowledge to a wide audience. The State Resilience Office has hosted five resilience webinars: Grant Opportunities, Grant Writing and Grant Assistance, Understanding Climate Data, Green Infrastructure and Nature-based Solutions, and Planning for Heat Season. Each event featured NC experts, local governments, and State Resilience Office staff. The Spotlight on Resilience newsletter promotes the webinars and the State Resilience Office permanently hosts recordings on the website. Going forward, the State Resilience Office will continue to host webinars and post recordings on its site.

3.0. Address the public health impacts of climate change

3.1 Increase understanding and awareness of the health impacts of climate change

3.1.1 Education and Outreach: Renewable Water Unit

Status: Ongoing

Expected Completion Date: Ongoing

The Renewable Water Unit, designed for middle school students, has been successfully implemented with the support of PBS NC and NC Sea Grant. DWR's team has ensured that the unit addresses the impact of human actions on water quantity and quality. The Division is also incorporating diverse perspectives to promote environmental justice awareness among students.

DWR is currently developing the Climate/Water/Resiliency Criteria I program for the Office of Environmental Education. The work group responsible for development is a partnership and collaboration with DWR, DCM, the NC Water Resources Research Institute, NC Aquariums, and the NC State Climate Office. This project is expected to launch as an EE Criteria I workshop to educate about climate issues through the lens of North Carolina.

3.1.2 Education and Outreach: Water Education Coffee Talks

Status: Ongoing

Expected Completion Date: Ongoing

The Water Education Coffee Talks have proven to be a valuable resource, supporting over 120 educators throughout NC. DWR has been successful in fostering an informal network where educators can share ideas, seek assistance, and stay informed about water resource opportunities simply by joining a monthly online meeting.

Water Education Coffee Talks continue to occur on the first Thursday of each month at 9 a.m. These unstructured discussions focus on methods and best practices to support effective water education. An unexpected result of these informal conversations has been the development of a network of statewide educators supporting innovative approaches to outreach opportunities, creek week implementation, outreach event planning, and general knowledge sharing.

3.1.3 Wastewater Energy Efficiency Training Program

Status: Underway

Expected Completion Date: December 2026

The Water and Wastewater Operators Energy Efficiency Program is designed to provide water and wastewater system operators in North Carolina, with priority given to systems that are designated distressed. This program will consist of 5 courses over the span of the next 2 years. Each course is 6 consecutive weeks in length, with each week consisting of one day of instruction focusing on energy efficiency concepts from basic measures such as lighting and HVAC to highly complex and specialized measures involving aeration, disinfection, and other site-specific wastewater processes. The Program will help identify low and potentially no-cost energy efficiency improvements that can have a significant impact on a system's bottom-line with short paybacks. The ultimate purpose of this Program is to empower attendees with the energy efficiency education, knowledge, and real-world applications to properly identify and optimize energy efficiency opportunities at their own systems both in the short and long term. Implementation assistance is currently underway with plans for follow-up/technical assistance, which will be provided by SEO to ensure operators are supported in their newfound energy efficiency knowledge and measure identification abilities.

3.1.4 Help local governments manage and mitigate the health impacts of extreme heat.

Status: Ongoing

Expected Completion Date: Ongoing

In partnership with the State Climate Office of North Carolina, the State Resilience Office completed its first [Planning for Extreme Heat Cohort program](#), which ran from December 2024 to April 2025. In total, six teams comprising 28 staff from nine jurisdictions and one multi-county entity completed the program. Participating teams represented over 15 percent of the population of North Carolina. They represented jurisdictions ranging in size from small towns with just over 9,000 residents to one of the state's largest counties, home to 1.164 million residents. Participants expanded their heat-resilience networks and learned about heat-related illnesses and how to prevent them, the groups most vulnerable to heat-related health impacts, where to find relevant data, best practices for heat mitigation and management, and more. All participants established an internal heat team and began working on a draft heat action plan.

During the 2025-2026 fiscal year, the State Resilience Office will run the Planning for Extreme Heat Cohort program again and will release an update of its [Heat Action Plan Toolkit](#).

3.1.5 Increase local governments' awareness of extreme heat as a hazard to include in their Hazard Mitigation Plans.

Status: Ongoing

Expected Completion Date: Ongoing

In partnership with North Carolina Emergency Management and the NC Department of Health and Human Services' Climate and Health Team, the State Resilience Office provides plan language to explain the health impacts of extreme heat already happening in North Carolina and gives presentations at local hazard mitigation planning meetings. The presentations highlight the growing threat of high heat days and high overnight temperatures, the high rates of individuals going to emergency departments during extreme heat in the region, the populations most vulnerable to extreme heat, suggested actions to include in local Hazard Mitigation Plan updates, and tools available to further extreme heat preparedness.

3.2 Initiate other projects aimed at addressing the public health impacts of climate change

3.2.1 Enhance Harmful Algal Blooms (HAB) Rapid Response Protocols

Status: Ongoing

Expected Completion Date: Ongoing

DMF continued to enhance sentinel site monitoring, collection, and processing for harmful algae species in shellfish growing waters throughout the coast. Equipment acquisition continued including two additional microscopes bringing the total to three coastwide. One additional staff member completed training in August 2023 at Bigelow Laboratory in Maine in the identification of harmful marine algal species bringing the total to three staff trained, including one in each region for quicker response time.

The staff and equipment enhancements have increased our ability to respond to coastal harmful algal blooms, including multi-agency collaboration related to several ocean-based blooms in the last year. This work with partners has resulted in quicker delivery of information to the public regarding blooms and their effect.

3.2.2 Establish Public Health Inspections of Shellfish Farms

Status: Ongoing

Expected Completion Date: Ongoing

A newly created position was filled in Spring 2024 to support inspections of shellfish leases in order to meet national health requirements. This will include ensuring adherence to operational plans including bird mitigation, and cultivation practices that could elevate *Vibrio* bacterial levels during the months when water and air temperatures are elevated.

The goal of inspecting all shellfish leases in NC each calendar year is on track. This position will continue to serve as a resource for shellfish leaseholders, harvesters, industry groups, and other agencies regarding education and best management practices related to the health aspects of shellfish cultivation.

4.0. *Invest in communities to achieve climate and resilience goals*

4.1 Increase energy affordability

4.1.1 Support Federal Opportunities for Low- and Moderate-Income Households

Status: Underway

Expected Completion Date: Ongoing

SEO is in the process of standing up several significant federal funding opportunities geared toward providing clean energy and energy efficient solutions to low- and moderate-income households.

The annual Weatherization Assistance Program (WAP) helps low-income North Carolinians, at or below 200% of the federal poverty level, save energy, reduce their utility bills, and stay safe in their homes. This program prioritizes the elderly, the disabled, families with children, high energy users, and the energy burdened. SEO administers this program with annual funding from the U.S. Department of Energy (DoE) and additional federal funding allocations and has a target weatherizing more than 1,100 homes annually.

SEO continued rolling out the \$89 million Infrastructure Investment and Jobs Act (IIJA) weatherization assistance program, previously known as Bipartisan Infrastructure Law (BIL), funded by the U.S. Department of Energy (DoE). The program seeks to scale weatherization efforts in NC, benefiting 5,945 low-income households in addition to the annual DoE WAP funds and targets. Like the annual DoE WAP, IIJA prioritizes households in disadvantaged communities and with vulnerable populations: a) elderly persons (age 60 or more), b) persons with disabilities, c) children under the age of 6 or expectant mothers, d) households that have a high energy burden, energy intensity, and, e) households that are high residential energy users (use electric strip heat as the primary heat source). IIJA funds are intended for single family site-built dwellings, mobile homes, and multifamily buildings. Properties can be owner or tenant occupied.

Additionally, the 2022 Home Energy Rebates (HER/HEAR) will provide more than \$209M to the State to promote the installation of energy efficiency and efficient electric technologies to low- and moderate-income single- and multi-family homes. In June 2024, SEO submitted the applications for HER/HEAR and received approval from DOE in January 2025. The Implementation of the program began in January 2025 with the support of a program implementer. Early rebates to low income, high energy burdened, rural households began in June 2025. The program has taken a phase-in approach to process applications in all counties by January 2026.

[The NC Solar for All Coalition \(the Coalition\)](#), led by DEQ and including the North Carolina Clean Energy Fund (NCCEF) and the North Carolina Clean Energy Technology Center (NCCETC), was awarded \$156 million by the EPA's Solar for All program to rapidly deliver solar and energy storage to low-income and disadvantaged communities (LIDAC) across the state. The Coalition engaged in program design efforts as part of a planning year afforded by the grant agreement, and the program was slated to launch multiple financial assistance products by late 2025. On August 7, 2025, the EPA announced that it was cancelling the Solar for All program and terminating grant awards, and DEQ received an official termination notice shortly thereafter. The State of North Carolina, along with several other Solar for All grantees across the country, is disputing this grant termination and has filed multiple lawsuits to contest the EPA's decision.

To optimize integration of the WAP, Home Energy Rebates, and Solar for All programs for engaging and benefiting disadvantaged communities, SEO was accepted to participate in a three-month virtual Learning Cohort of the Just and Clean Energy Future - State Implementation Accelerator hosted by the Communities First Fund and funded by the White House's Department of Environmental Quality.

4.2 Create clean energy and resilience related jobs and economic growth

4.2.1 Training for Residential Energy Contractors (TREC) Formula Grant

Status: Conditional Assistance Agreement received but funding is not yet available.
Expected Completion Date: TBD

The Training for Residential Energy Contractors (TREC) Program in NC will provide funding to train, test and certify residential energy efficiency and electrification contractors. TREC will deploy innovative, effective and equitable workforce development programs to train workers to make homes healthier and more energy efficient. SEO plans to leverage these funds with other funding for programs such as HOMES and HEAR Rebates, Weatherization Assistance Program and Energy Auditor Training. SEO submitted the application to DOE for this formula grant award in January 2024 but to date, SEO is waiting to receive the formula award.

4.3 Alert residents and businesses of state and federal grant opportunities that advance climate and resilience goals

4.3.1. Action Strategy for PFAS

Status: Ongoing

Expected Completion Date: Ongoing

In June 2022, DEQ announced the DEQ Action Strategy for PFAS detailing actions the department will take to address PFAS contamination in North Carolina. The strategy focuses on three primary objectives: protecting communities, protecting drinking water, and cleaning up contamination. With the publication of the strategy, DEQ announced the agency will propose groundwater and surface water standards for priority PFAS compounds and evaluate PFAS emissions and discharges in permitting decisions. Some of the activities associated with the action strategy include PFAS sampling of hundreds of small public water systems to characterize the occurrence of PFAS in drinking water in NC and assist with compliance with the federal drinking water standards.

Additionally, as economic development continues to expand in North Carolina, the Department is also examining the use of PFAS in new industries and facilities. DEQ is committed to a whole Department approach to address potential impacts resulting from the advancement of clean energy production in the state.

4.3.2. DEQ Online Grants Hub

Status: Completed

Expected Completion Date: January 2023

DEQ launched a new webpage that provides information on all DEQ funding programs in one place, along with a searchable list of currently open applications for grant opportunities. The new Grants page is a one-stop shop for everyone, including local governments, businesses, community and nonprofit organizations and others, looking for grant and loan funding information for a variety of environmental projects. The page includes recurring and one-time funding sources across DEQ divisions, with links to additional information including eligibility, how to apply, and program contacts.

4.3.3. Mailing Lists for Federal and State Funding Opportunities

Status: Ongoing

Expected Completion Date: Ongoing

SEO sends emails to the public, organizations and contractors for notices regarding available federal or state grant opportunities for funding.

DCM staff, through the RCCP program, along with the DCM planners, regularly send out emails and correspondences to both the coastal communities and our list of contractors on available federal or state grant opportunities for funding.

4.3.4. North Carolina Resilient Communities Funding Forum

Status: Complete

In February 2023, DCM and NCORR hosted the first North Carolina Resilient Communities Funding Forum. This event was designed to introduce community leaders, natural resource managers, policymakers, and other NC stakeholders to federal, state, and nonprofit funding opportunities for resilience-related projects. The event centered around presentations from funders, such as the National Oceanic and Atmospheric Administration, the NC Division of Water Resources, the Golden LEAF Foundation, the NC Rural Center, and many more. Attendees had the opportunity to participate in a grant writing session to learn helpful skills to advance their projects and had a chance to meet directly with the funders to ask questions.

The event was designed to be inclusive, free to attend, and delivered alongside real-time Spanish translation. All presentations and materials were recorded, uploaded, and made freely available to the public (many of whom may not have been able to attend). These materials were also provided in Spanish.

4.4 Initiate other projects aimed at investing in communities to achieve climate and resilience goals

4.4.1 Improve the Ability of Communities to Benefit from Grant-Funded Water Quality Improvement Actions

Status: Ongoing

Expected Completion Date: Ongoing

In 2023, enabled by EPA 319 grant guideline revisions, the NC 319 grant revised grant requirements to provide underserved communities the ability to develop watershed restoration plans using implementation funds, subject to the competitive pass-through process, and waived the local 40% match requirement for restoration projects proposed by underserved communities, both based on DEQ's mapping.

In the coming year, grant staff intend to focus next steps on improving outreach to underserved communities with surface water impairments and better understanding their needs relative to grant opportunities.

4.4.2 NC Climate Education Network

Status: Ongoing

Expected Completion Date: Ongoing

DWR continues to hold periodic online "open house" events for educators to stay updated on the latest research and teaching techniques related to climate education. The agency is actively incorporating environmental justice and equity considerations by ensuring these events are accessible to educators from diverse backgrounds and regions.

In the coming year, the Division plans to expand its network by reaching out to more educators and institutions across the state. Additionally, DWR aims to enhance the content offered during the events to address climate change's resiliency aspects more comprehensively.

4.4.3 Participate in Reviewing and Prioritizing Projects Identified in RISE Portfolios

Status: Complete

Expected Completion Date: 2023

Basin planners participated in community events held by NCORR to identify priority projects that strengthen regional resilience. Final reports for the priority projects identified by each region/Council of Governments (COG) were released in December 2022.

Projects are summarized in the Cape Fear River basin wide water resources management plan (basin plan) which is expected to be approved by the Environmental Management Commission in mid-2024.

4.4.4 Analyze Grant Distribution

Status: Underway

Expected Completion Date: Ongoing

RMMS staff created a map for internal use to better understand where DEQ awarded recycling grants (Community Waste Reduction and Recycling; Recycling Business Development; Food Waste Reduction, Abandoned Manufactured Homes, etc.) in relation to underserved communities.

By analyzing the distribution DEQ awarded past grants, staff can consider how to improve the grant decision-making process.

4.4.5 Integrate Community Layer into Grant Priority Rating Systems

Status: Underway

Expected Completion Date: 2028

4.4.6 Section 40101d Preventing Outages and Enhancing the Resilience of the Electric Grid

Status: Underway

Expected Completion Date: 2028

4.4.7 Co-host a series of resilient recovery workshops for western North Carolina communities affected by Hurricane Helene.

Status: Complete

Expected Completion Date: Spring 2025

From January to June 2025, the State Resilience Office, in partnership with FEMA's Community Assistance Recovery Support Function and WNC Councils of Government, co-hosted four day-long resilient recovery planning workshops for Hurricane Helene-affected local governments in western North Carolina. The State Resilience Office coordinated the attendance of state agency staff whose programs provide recovery or resilience services, funding or support to participate in these workshops, and offer expertise to WNC local governments. These workshops included personnel from: DEQ's Division of Water Infrastructure; Department of Natural and Cultural Resources; NC Forest Service; NC Department of Transportation; Governor's Recovery Office for Western NC; and the Governor's Office. During these workshops, the State Resilience Office provided presentations on resilient recovery planning, the NC Resilient Communities Planning Guide, and resilience success stories from across NC. The City of Asheville and Buncombe County, Land of Sky Regional Commission, Southwestern Council of Governments, High Country Council of Governments, and Foothills Commission hosted workshops.

4.4.8 Section 40103b

Status: Conditional Assistance Agreement received but funding is not yet available. Media coverage appeared to indicate that this funding may be rescinded, but no communication has been received from DOE on the status of this funding or when it might be available.

Expected Completion Date: 5 to 7 years after funds are awarded

Under BIL Provision 40103(b) – Program, Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (Grid Innovation Program) funding is provided through competitive solicitation to demonstrate innovative approaches to transmission, storage, and distribution infrastructure to harden and enhance resilience and reliability. The “Innovative North Carolina Transmission Rebuild Project” was selected for funding at \$57 million dollars. SEO will partner with Duke Energy to rebuild a key transmission line in Eastern NC and deploy advanced transmission technology that will: help reduce power outages for more than 14,000 customers while reducing customer minutes out by an estimated 10%; increase the grid capacity; enable the connection of new clean energy resources; minimize the impact of construction on local communities by utilizing the existing right of way; and create new jobs and workforce development opportunities. Duke Energy will provide \$57 million dollars in match, making the project total \$114 million dollars. DOE is currently conducting a comprehensive review of financial assistance activities, and no further guidance has been issued on the conditional assistance agreement. Conditional assistance award was expected to be finalized in April 2025 but was extended to August 2025 by DOE. To date this award agreement is still conditional with no updated timeline provided by DOE.