

2024 Climate Strategy Report

NC Department of Administration

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Introduction

About the NC Department of Administration

As stated on the [NCDOA website](#), the N.C. Department of Administration serves as the business manager for North Carolina state government. The department oversees government operations such as building construction, purchasing and contracting for goods and services, maintaining facilities and grounds, managing state vehicles, acquiring and disposing of real property, and operating services such as courier mail delivery and the sale of surplus property.

Additionally, NCDOA oversees many of the state's advocacy programs, which advocate for and serve diverse segments of the state's population that have been traditionally underserved.

The North Carolina Department of Administration (NCDOA) includes the following divisions: [Council for Women & Youth Involvement](#), [Historically Underutilized Businesses](#), [Commission of Indian Affairs](#), [Non-Public Education](#), [Mail Service Center](#), [Purchase and Contract](#), [Motor Fleet Management](#), [State Surplus Property](#), [State Construction](#), [Facility Management](#), [State Parking](#), and [State Property](#).

NC Department of Administration's Vulnerabilities to Climate Change

The buildings operated and maintained by NCDOA's Facility Management Division are vulnerable to the effects of climate change. As temperatures get more extreme, the demands on the buildings' heating and cooling systems increase. Most of NCDOA's building square footage was built in or before the 1970s, to design specifications that made sense for the climate at those times. The more extreme temperatures we see today are pushing these buildings to their limits, negatively impacting equipment performance and occupant comfort.

NCDOA is expanding the downtown chiller plant to increase cooling capacity and create redundancy (in the event that one of the existing chillers is not operational), which should allow for better, uninterrupted cooling.

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

Chapter 4: Climate and Environmental Justice

- NCDOA has finalized its Environmental Justice Goals for the agency. These goals will be published at a later date.

Chapter 5: Vulnerability, Risk, and Potential Options for Addressing Climate Related Hazards

- NCDOA is adding capacity and redundancy to the downtown chiller plant.

Reducing Energy Use

NCDOA has an engineer from State Construction Office (SCO) assigned as energy manager for EO80, and a sustainability specialist in Facility Management Division (FMD). This year FMD hired a project manager to help with energy efficiency projects in state owned buildings. SCO and FMD are working together towards meeting energy efficiency goals of EO80 as well as goals of EO246. Efforts include: participation in the Interagency Resilience Team; fostering educational and awareness efforts for internal staff; identifying energy savings opportunities; involvement with projects, tracking energy and utility metering data, and reporting on plans and progress.

Addressing Environmental Injustices and Inequities

In an effort to continue work that began under EO 143, the Andrea Harris Equity Task Force (Task Force) was reestablished on August 17, 2022, under EO 268. With a new charge given to this Task Force, members and staff liaisons got to work evaluating what was left to complete from EO 143 and in what direction to move any new goals. The mission of the Task Force is to identify best practices and advise state government on actions that will further the economic development of disadvantaged communities, improve health and wellness outcomes in underserved communities, and advance equitable practices within state agencies that are inclusive of the lived experience of all North Carolinians.

Since 2022, the Task Force has been developing future goals and recommendations to meet the charge in EO 268. Several recommendations will be presented in the Final Task Force report, due August 2024, that will carry forth the charge laid out for the Task Force. The previous reports and final report can be found at <https://www.doa.nc.gov/boards-commissions/andrea-harris-equity-task-force>.

Public Participation Plan

As per Executive Order 246, the Administration Department drafted the first version of the Public Participation Plan. The plan was published on NCDOA's website and took public feedback and comments through June 30th. The plan consists of four parts including public meetings, improvement of the website, staff trainings, and ongoing improvement of public access and participation. All four areas focus on remediating barriers to participation for historically marginalized groups to create greater engagement and transparency.

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 LED Lighting Conversion

Status: Ongoing

Expected Completion Date: Ongoing

Fluorescent, halogen, and other non-LED bulbs are being phased out and replaced with LEDs. At least nine buildings are fully LED, and Facility Management has phased in LEDs for most building outdoor lighting.

Converting to LED lighting improves NCDOA buildings' lighting quality, which increases visibility for people of all ages, helps maintain occupants' circadian rhythms, and increases productivity.

Reducing energy usage in state owned buildings decreases NCDOA's impact on EJ communities by requiring less electricity from coal and natural gas fired power plants. LEDs also provide better quality lighting than the bulbs they replaced, which improves visibility for people of all ages.

Over the next 12 months, State Construction and Facility Management will continue collaborating on several upcoming full building conversions. For buildings not slated for full conversion, fluorescent bulbs are being replaced with LED as they burn out and through small scale projects.

1.1.2 Steam Trap Maintenance Program

Status: Ongoing

Expected Completion Date: Ongoing

The steam trap maintenance program, which began in 2019, surveys steam traps in the steam distribution system and replaces failed or ineffective traps. The duty of a steam trap is to discharge condensate, air, and other incondensable gases from a steam system while not permitting the escape of live steam.

Repairing steam traps mitigates steam loss, which reduces the amount of steam generation and water usage required, therefore lowering CO2 emissions.

The harvesting, transportation, and burning of natural gas disproportionately impacts EJ communities. Reducing steam loss in the downtown steam loop decreases NCDOA's impact on EJ communities by using less natural gas use at the steam plant.

In the next 12 months, Facility Management Division plans to continue evaluating and repairing traps within the downtown distribution system.

1.1.3 Labor Building Window Replacement

Status: Underway

Expected Completion Date: June 2025

This project will remove existing single-pane windows and replace them with new double pane windows. The existing windows are made of wood and showing signs of deterioration and water infiltration. Replacement windows will be double pane, thereby increasing energy efficiency and providing weather protection.

Reducing energy usage in state owned buildings decreases NCDOA's impact on EJ communities by requiring less power from coal and natural gas fired power plants.

Project is under construction. Design coordinated closely with the State Historic Preservation Office to ensure materials and colors are suitable for this historic structure.

In the next 12 months the project will complete construction.

1.1.4 State Records Building Air Handling Units Replacement

Status: Underway

Expected Completion Date: October 2025

This project will completely replace most of the aged Air Handling Units (AHU) equipment (original to the building) with newer energy efficient AHUs. This will also replace obsolete pneumatic control systems serving the units. The space temperature and humidity are critical components of long-term stable records storage.

Reducing energy usage in state owned buildings decreases NCDOA's impact on EJ communities by requiring less electricity from coal and natural gas fired power plants.

In the next 12 months the project will be bid for construction and construction will begin.

1.1.5 Government Complex Electrical Lighting Upgrades

Status: Underway

Expected Completion Date: August 2025

This project will upgrade aging lighting to LED through a combination of retrofits and light fixture replacement at certain locations. Project will also identify areas where enhanced lighting controls will improve energy efficiency.

Reducing energy usage in state owned buildings decreases NCDOA's impact on EJ communities by requiring less power from coal and natural gas fired power plants.

Over the next 12 months lighting designer will perform design and analysis and provide plans and specifications for this project to award a construction contract.

1.1.6 Museum of History Building Controls Replacement

Status: Underway

Expected Completion Date: November 2025

Due to the age and condition of the existing pneumatic control system, this building needs a complete HVAC control system replacement. Furnish and install an upgrade to the existing DDC Building Management upgrade all field controllers with the latest revision of hardware graphics replacement of VAV box controllers and their associated reheat valves for approximately 150 identified boxes. AHU DDC controls in the mechanical rooms also will be upgraded. Replace and re-commission CO sensors in the underground parking deck. Replace existing hot water pumps; install new pumps pressure sensors and VFDs for pump speed control.

Project scope is being coordinated with the museum renovation project. The museum will be closed during the renovation.

Reducing energy usage in state owned buildings decreases NCDOA's impact on EJ communities by requiring less power from coal and natural gas fired power plants.

In the next 12 months, construction documents will be completed, and the project will be bid for construction.

1.1.7 Obsolete Refrigerant Chiller Replacement

Status: Underway

Expected Completion Date: TBD

The chiller was replaced at the State Records Building. The Administration Building chiller was taken out of service in conjunction with the demolition of the building. Funding has been requested for replacing chiller at the Museum of Natural Science. R-123 is an HCFC refrigerant that is being phased out by 2030 due to its ozone depletion potential. Funding will be requested to replace the chiller at the Museum of Natural Science. The completion of this item depends upon funding.

In the next 12 months funding will be requested.

1.1.8 Improve Chilled Water Efficiency

Status: Underway

Expected Completion Date: TBD

Improve chilled water efficiency in buildings on the chilled water loop in Downtown Government Complex. Replace chilled water coils in Air Handling Units in buildings on the chilled water distribution loop to improve Delta T. Improving Delta T (getting higher Delta T, or temperature differential) has a direct impact on existing distribution piping size from the chiller plant. It will allow desired system performance with smaller pipe size and result in better pumping efficiency. This energy efficiency project is directly related to the Chiller Plant Expansion Project.

Reducing energy usage in state owned buildings decreases NCDOA's impact on EJ communities by requiring less electricity from coal and natural gas fired power plants.

This year the project was funded and is currently in the early stages. Designer selection and design phase will identify the priority cooling coils for replacement.

In the next 12 months the designer selection will be completed and the design phase will begin.

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

1.2.1 Energy Efficient Equipment

Status: Ongoing

Expected Completion Date: Ongoing

Facility Management replaces defunct equipment with an energy efficient alternative, where possible. This applies to lighting, HVAC, plumbing, and other building systems.

Reducing energy usage in state owned buildings decreases NCDOA's impact on EJ communities by requiring less power from coal and natural gas fired power plants.

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

NCDOA's contribution to ZEVs is detailed in the following section.

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

1.4.1 Achieve High Rate of ZEV and Hybrid Adoption from Agencies

Status: Ongoing

Expected Completion Date: Ongoing

Motor Fleet Management (MFM) identified and highlighted which vehicles were suitable for Zero Emission Vehicles (ZEV) or hybrid replacement. NCDOA and the Governor's Office emphasized that the vehicles identified on the replacement list are presumed suitable for replacement with a ZEV based on collected driving data and reiterated the importance of transitioning the state's motor fleet in accordance with Executive Order 80. MFM has begun to replace identified vehicles with a hybrid or ZEV when they reach the end of their lifecycle and will continue to identify vehicles for replacement with either a ZEV or hybrid.

MFM will continue to work with agency stakeholders to educate and answer any questions about ZEV fleet adoption. Because of the new replacement process, MFM anticipates a considerable increase in EVs purchased by agencies in the next few years.

1.4.2 State Procurement Contract

Status: Ongoing

Expected Completion Date: Ongoing

Motor Fleet retooled the state vehicle procurement contract to secure more cost-effective ZEV and hybrid options. As a result of the new contract, the state fleet will standardize around hybrid sedans where ZEV sedans are not feasible. In February 2024, a new statewide term contract for motor vehicles was established that makes new ZEVs available for purchase. Several of these vehicle models are larger than those previously available, making them suitable for more use cases that agencies experience.

All agencies and MFM will track ZEV trends and benefits of agencies transitioning to ZEVs to the extent practicable and explore methods for recognizing increased ZEV utilization among state agencies, universities, and local governments.

1.5 Initiate other initiatives to decarbonize the transportation sector

1.5.1 Decrease vehicle idling time

Status: Ongoing

Expected Completion Date: Ongoing

Facility Management is being mindful of unnecessary idling and working to decrease facility vehicle idling time through employee education.

Less idling results in fewer emissions and fuel usage, decreasing GHG emissions and impacts on EJ communities.

1.6 Initiate other projects aimed at reducing statewide greenhouse emissions

1.6.1 Recycling Signage Updates

Status: Ongoing

Expected Completion Date: Ongoing

Recycling signs are being updated in the DEQ and Archdale buildings in collaboration with DEQ. The new signs communicate which items are and are not recyclable more clearly than the existing signs.

By diverting more material from landfill, NCDOA can decrease its impact on landfills and the communities surrounding them.

NCDOA will continue to update signs in buildings as possible.

2.0. Increase statewide resilience to the impacts of climate change

2.1 Evaluate the impacts of climate change on NCDOA's programs and operations

2.1.1 Hired a Project Manager

Status: Complete

Expected Completion Date: May 2024

Increased demand on HVAC equipment as a result of extreme heat has created a need for more energy saving measures. Facility Management has hired a project manager to help with energy efficiency projects in state owned buildings.

2.2 Integrate climate change adaptation practices and resiliency planning into the NC Department of Administration's policies and operations

2.2.1 Chiller Plant 2 Expansion

Status: Underway

Expected Completion Date: June 2026

The existing Chiller Plant 2 on N. Salisbury Street has two existing chillers. The Chiller Plant project will construct a new chiller plant building to replace the existing plant that is reaching the end of its useful service life. The current design includes a third chiller to provide redundancy with provisions for one additional chiller in the future to provide additional cooling capacity. The new plant will operate with the existing Thermal Energy Storage tank.

The project begins construction in 2024 with three phases to be completed by June 2026. Long lead time equipment and material are ordered.

In the next 12 months, temporary chilled water piping will be installed to allow the existing plant to continue operation while the new chiller plant building is constructed.

2.2.2 Update the North Carolina Uniform Floodplain Management Policy for State Construction

Status: Complete

Expected Completion Date: January 2024

Executive Order 266, issued July 25, 2022, established a schedule of 18 months to update and issue the revision of the Uniform Floodplain Management Policy for State Property. The initial policy was established in 1979 and updated in 1990. The revised policy became effective January 25, 2024. Given the magnitude of the changes, SCO has established a transition period, which ends February 1, 2025, during which both policies can be used.

The policy states that the objective are to: Protect human life, safety, and health; minimize expenditure of public money for costly flood control projects; minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; minimize prolonged loss and interruption of State business; minimize damage to public facilities and infrastructure; reduce construction in the floodplain to the greatest extent feasible; minimize flood damage to state-owned assets, considering the impacts of sea level rise and climate change; support natural hydrologic conditions and the beneficial services provided by natural infrastructure; minimize damage to private and public property due to flooding; maintain the natural and beneficial function of floodplains; and help make flood insurance available to local communities through the State's participation in the National Flood Insurance Program.

NCDOA took an active part working with stakeholders to update the policy. The State Construction Office is responsible for administering the policy.

2.3 Assist the communities served by the NC Department of Administration to implement climate change adaptation practices and resiliency planning

NCDOA has nothing to report at this time.

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 Native Prairie

Status: Complete

Completed Date: July 2024

Facility Management’s landscaping team helped install a native prairie in front of the Archives and History Building that included more than 300 native plants. Remaining plants from the project were planted at the Governor’s Mansion.

Native plants require less irrigation, which helps conserve NC’s water resources.

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 Sustainability Meetings

Status: Ongoing

Expected Completion Date: Ongoing

Facility Management supervisors meet several times a year to discuss various topics related to sustainability, including the social impacts of climate change.

Awareness of these topics is critical to incorporating them into decision making throughout the year.

3.2 Advance health equity

NCDOA has nothing to report at this time.

4.0. Invest in historically underserved communities

4.1 Increase affordability for low- and moderate-income households

NCDOA has nothing to report at this time.

4.2 Create jobs and economic growth

4.2.1 Increase spending by state and local governments on goods and services with historically underutilized businesses (HUB)

Status: Ongoing

Expected Completion Date: Ongoing

NCDOA uses HUB vendors whenever possible to perform project work. Examples include custodial contractors, LED lighting installation contractors, and recycling contractors.

Prioritizing HUB vendors provides opportunities to underserved communities and supports business diversity. HUB spending on goods and services increased by \$76 million and construction spending with HUBs increased by over \$107 million from FY 21-22 to FY 22-23.

4.2.2 Encourage HUB vendors to hire, train and retain staff from their communities

Status: Underway

Expected Completion Date: June 2026

Staffing is a metric that the NC Minority Business Development Agency (MBDA) Business Center tracks with a goal of 250 jobs both retained and created per year. In Fiscal Year 22-24 the NC MBDA Business Center reported 630 retained or created by clients. The NC MBDA Business Center has a 5-year grant, so it is expected that there will be a minimum of 1,200 jobs created or retained during that time.

4.3 Alert residents and businesses, particularly those in underserved communities, of state and federal grant opportunities

Not currently applicable (no grants currently being offered. HUB Office would notify HUB vendors if new grants became available).