

# **North Carolina Department of Environmental Quality**

## **Division of Mitigation Services**

### **Legislative Annual Report**

**November 1, 2025**

This report is submitted to meet the requirements of §143-214.13.



North Carolina Department of Environmental Quality | Division of Mitigation Services  
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## **North Carolina Division of Mitigation Services**

The North Carolina Division of Mitigation Services (DMS) is a nationally recognized Department of Environmental Quality (DEQ) initiative that restores and protects wetlands and waterways for future generations while offsetting unavoidable environmental impacts from development. DMS supports environmentally responsible economic development through the procurement of high-quality restoration projects that satisfy mitigation requirements. Since its inception, DMS has been involved in 947 projects since its inception that have protected more than four-million feet of stream and 81,795 acres of natural areas from the mountains to the coast of North Carolina.

Protecting North Carolina's natural resources is critical to maintaining the state's quality of life, its economic growth and the health and well-being of its residents. DMS works to ensure that cost-effective mitigation alternatives succeed in benefiting the state's water resources.

DMS offers four In-Lieu Fee (ILF) mitigation programs designed to assist private and public entities in meeting state and federal compensatory mitigation and nutrient offset requirements. DMS maximizes mitigation investments to restore streams, wetlands, and riparian buffer areas using a watershed approach by working with state and local partners, willing landowners, and private vendors. The N.C. Department of Transportation (NCDOT) and other developers voluntarily use DMS to move projects forward in a timely and cost-effective manner.

In the fiscal year (FY) 2024-2025, the DMS:

- Assisted the NCDOT in obtaining permits for 65 transportation projects by providing 39,659.000 stream mitigation credits and 36.611 wetland mitigation credits
- Assisted customers with 189 development projects in the Statewide Stream and Wetland ILF, Riparian Buffer Mitigation ILF, and Nutrient Offset ILF Programs by providing:
  - 37,040.000 stream credits
  - 36.813 wetland credits
  - 7,453,468.500 credits of buffer mitigation (equivalent to 171 acres of buffer restoration)
  - 10,322.805 pounds of Nitrogen reduction
  - 5,969.540 pounds of Phosphorus reduction.
- Demand for Nitrogen offset credits from the program increased by more than 800% over the previous fiscal year's requirements. Phosphorus offset credit demand continues to increase, especially in the Falls Lake watershed. Currently, Phosphorus offsets are required in only the Falls Lake watershed of the Neuse River basin and throughout the Tar-Pamlico River basin.
- Further developed the Natural Infrastructure Flood Mitigation Program (NIFMP) as follows:
  - The hydrologic and hydraulic modeling project to quantify the effect of buffer, stream, and wetland restoration on flood attenuation in the Stoney Creek watershed (Neuse River basin) was completed by Ecosystem Planning and Restoration, PLLC (EPR).
  - Construction of the first project in the Stoney Creek Pilot Project started in March 2025.
  - Completed the study and modeling of Carolina Bays for flood mitigation potential.



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## **Natural Infrastructure Flood Mitigation Program**

In 2020, the NC General Assembly created the Natural Infrastructure Flood Mitigation Program (NIFMP) in DMS as part of SL-2079. The session law incorporated flood storage capacity enhancement projects into the activities of and purposes of DMS. The program's purpose is to use natural infrastructure to mitigate flooding in small, targeted watersheds using the DMS's full delivery procurement methods. Since the creation of this program, DMS obtained a Community Development Block Grant from the North Carolina Office of Resilience and Recovery to fund the development of the program's goals, complete modeling to study the effect of restoration on flood attenuation, and to conduct analyses to determine the best nature infrastructure solutions for North Carolina. The grant ended September 1, 2025, with all deliverables met.

Funding for flood storage projects and flood storage capacity planning was included in the 2021 Appropriations Act. DMS received \$3.5 million in appropriations to create one or more pilot projects addressing chronic flooding in the Stoney Creek watershed that impacts businesses, roadways, and access to emergency services in Wayne County and Goldsboro. DMS received \$5 million additional funding during the previous fiscal year to expand the work in the Stoney Creek watershed.

The Stoney Creek Pilot Project serves as the basis for expanding natural infrastructure flood mitigation projects to additional watersheds and scaling solutions to enhance community resiliency across North Carolina. The NIFMP also seeks to mitigate flooding using natural infrastructure and constructed systems that mimic natural processes.

Construction of the first flood mitigation project began in March 2025 at Wayne Community College. A kickoff event was held on March 28, 2025, at the project site. The project includes a wetland stormwater basin with a footprint of approximately 9.6 acres. Based on the current design, the depth from the top elevation to the bottom of the basin elevation is 10 feet. The design is set to capture 175,338 cubic feet of stormwater runoff. All construction was completed in September 2025 except for vegetation planting that will occur in the dormant season. A second project also located in the Stoney Creek Pilot Project area is a planned detention pond and is in the early stages of development.

DMS contracted with Ecosystem Planning and Restoration (EPR) to develop hydrologic and hydraulic model quantifying the effect of buffer, stream and wetland restoration on flood attenuation, and to develop and design projects. The modeling is complete and the tool to estimate flood mitigation needs and to compare flood projects is near completion.

Additional modeling and studies were contracted with Resource Environmental Solutions (RES) to inventory, map, and model Carolina Bays to determine restoration and flood mitigation potential. The final report is complete, and DMS plans to incorporate the maps into DMS watershed planning for utilization in future flood mitigation RFPs.

Other actions related to flood mitigation activities currently underway by DMS are: (1) a request for proposals (RFP) to procure flood mitigation projects in the Cape Fear, French Broad, Lumber, Tar-Pamlico, and White Oak River basins is planned for advertisement during SFY 2026; and (2) incorporating flood mitigation into the DMS watershed planning activities and analyses.



## **NC Flood Resiliency Blueprint**

The Blueprint is a statewide flood resilience planning effort to serve as the backbone of North Carolina's flood resiliency planning and project decision-making to result in actionable projects. The goal is to make North Carolina more resilient to flooding disasters, by not only limiting the extent and severity of flooding but by building systems that allow communities to recover more quickly and limit future risks. A key outcome is the development of the North Carolina Flood Resiliency Blueprint Tool (Blueprint Tool), a web-based decision support tool targeted towards local, state, and regional stakeholders and decision-makers, that is interactive, easy to understand and use, and dynamic over time. The Blueprint Tool will help communities, local governments develop, evaluate, and prioritize resilience actions as well as plan and marshal funding to implement those priorities. The Blueprint's goals are to:

- Identify sources and types of flooding.
- Account for existing resilience efforts, programs, and funding sources.
- Inventory data & identify data gaps.
- Develop visualization and decision-making tools that quantify and map flood risk, match appropriate resilience tools and tactics to areas of risk, match available funding sources to specific actions, and prioritize specific actions.
- Make recommendations for statewide implementation, including governance and decision-making structures, future blueprint iteration management, watershed-scale stakeholder engagement, and stewardship of projects that receive state funding.

Phase I was completed in March 2024. Phase II focused on developing Blueprint Tool. The Blueprint Tool was released publicly in April 2025 and was followed with technical training for partners and contractors working on the Blueprint. Additional enhancements are underway to provide better understanding of the State's exposure to flooding and are expected to be complete in early Fall 2025.

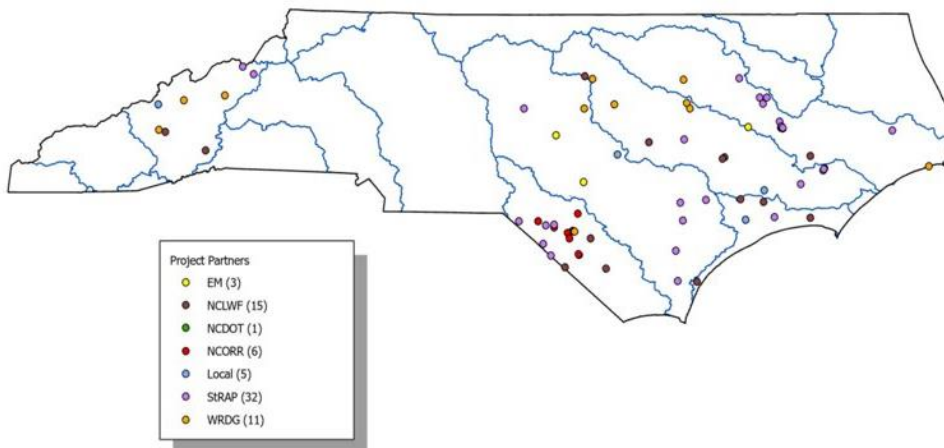
Phase III centers on developing River Basin Action Strategies (RBAS) for the six priority river basins specified in legislation. The draft Neuse River basin RBAS was completed under Phase I and is undergoing revisions with updated modeling and stakeholder feedback. The five additional river basins are Cape Fear, French Broad, Tar-Pamlico, White Oak, and Yadkin. The Blueprint team is working with state and local stakeholders in those areas to develop and implement river basin specific action strategies including local capacity and detailed vulnerability assessments via data-driven prioritized structural and non-structural flood resiliency projects.

DEQ received \$96 million to implement flood resiliency projects in targeted river basins once the draft Blueprint was completed in December 2023. DEQ has used the Blueprint to identify potential flood resiliency projects that can be implemented before the RBAS are completed. The most efficient way to quickly implement flood resiliency projects is to partner with state agencies and local governments that already have projects that meet the Blueprint prioritization criteria but are unfunded or underfunded. This allows DEQ to implement projects more quickly and at a lower cost while developing new projects, capacity, and infrastructure within the Blueprint team. To date, the Blueprint has partnered with other entities to implement 76 projects. Project types include culvert upgrades, pond capacity upgrades, stream restoration, and stream debris removal. Partnership project summaries and a map with the location of the projects are below.



Partner / Source	Amount	Individual Projects
Department of Agriculture - StRAP 2023	\$4,721,991.00	32
Department of Natural and Cultural Resources - Land Water Fund (21-23)	\$10,186,744.00	18
Direct Funding Local Government - NCORR Identified (RISE Priority) Projects	\$3,728,476.00	5
NC Emergency Management - 2023 Disaster Relief and Mitigation Fund	\$3,910,000.00	3
NC Department of Transportation	\$225,900.00	1
Lumberton Recovery and Infrastructure Resilience - NCORR	\$8,000,000.00	6
Water Resources Development Grants - DEQ	\$5,858,513.00	11
<b>TOTAL</b>	<b>\$36,631,624.00</b>	<b>76</b>

## *Implementation – Projects Under Contract*



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Examples of the Blueprint-based project selection criteria include:

- Ability to reduce risk to human life
- Ability to reduce flood impact on critical community infrastructure (e.g., emergency facilities, evacuation routes, and utilities)
- Ability to reduce flood damage to other infrastructure, homes, businesses, etc.
- Whether the projects had been identified in a Hazard Mitigation or other Resilience Planning efforts
- Whether the projects are in high-risk flooding areas
- Likelihood of reducing flood risk to underserved communities
- Whether the projects serve additional public benefit (e.g., parks, trails, etc.)
- Whether the project clearly had a flood resiliency benefit, even without additional data collection, modeling and analysis
- Stakeholder support

Other projects are in development, including an innovative project (an Agricultural Pond Flood Storage Pilot project) in partnership with the NC Department of Agriculture Consumer Services. The Blueprint Team is also partnering with the Natural Infrastructure Flood Mitigation Program through an FD RFP pilot to deliver natural infrastructure projects to combat extreme flooding events. These potential projects will be implemented through DMS project management, along with state, local, private, public, and nonprofit partnerships.

The Blueprint team continues to focus on developing the RBAS for the six identified targeted river basins and plans to expand to all 17 river basins within North Carolina. The Blueprint continues to evolve as a dynamic platform, incorporating new data and stakeholder feedback to build long-term resilience. The Flood Resiliency Blueprint is delivering tangible benefits, positioning North Carolina as a leader in proactive flood mitigation. Continued NCGA support will be essential to expand its impact and protect lives, property, and livelihoods statewide.



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## **Statewide Stream and Wetland Mitigation Losses and Gains**

G.S. §143-214.13 requires DMS to document statewide wetland losses and gains and compensatory mitigation performed under G.S. §143-214.8 through G.S. §143-214.12. The data in **Table 1** below have been provided by the Division of Water Resources (DWR) and reflect permitting by the DEQ. The remainder of this report documents DMS compensatory mitigation.

**Table 1. Permitted Stream, Wetland, and Buffer – Losses and Gains\***

<b>NCDEQ – DWR – Fiscal Year 7/1/2024 through 6/30/2025</b>	
<b>Streams (Linear Feet)</b>	<b>Amount – feet</b>
Lost from Permitting	49,012.00
Gained from permitting (mitigation)	21,288.00
<b>Wetlands (Acres)</b>	<b>Amount – Acres</b>
Lost from Permitting	95.75
Gained from permitting (mitigation)	63.12
<b>Riparian Buffers (Acres)</b>	<b>Amount – Acres</b>
Lost from Permitting	75.14
Gained from permitting (mitigation)	33.85

\*Data is from the NCDEQ – DWR database. Due to permit processes, mitigation and impacts may not (usually do not) occur in the same quarter. Data may include impacts to resources that do not require mitigation (under required thresholds, for example). Due to versions and revisions, different versions of the same project may occur in the same reporting period, causing a double calculation of impacts. As of May 4, 2017, the stream mitigation threshold requirements changed. Only impacts greater or equal to 300 linear feet of perennial stream require mitigation. As of June 15, 2020, the wetland mitigation threshold requirements changed. Impacts 0.10 acre or greater to wetlands require mitigation. Mitigation required by the U.S. Army Corps of Engineers applicable to permitted impacts is not tracked by DWR.

## **Property Inventory**

During the 2024-2025 fiscal year, the State Property Office closed 36 conservation easement transactions totaling more than 662 acres associated with DMS's projects. A complete listing of the properties closed this fiscal year is shown in **Appendix A-1**.

Since the program's inception, more than 81,795 acres of conservation land or conservation easements have been acquired by DMS and its partners. A complete inventory of all properties associated with DMS projects acquired to date is presented in **Appendix A-2**.



## Accounting of Receipts and Disbursements of the Ecosystem Restoration Fund

The Ecosystem Restoration Fund is the account for the Statewide Stream and Wetland ILF Program. This program has two main accounts, Fund 205451 and Fund 205201. **Table 2** below shows the program financials for the 2024-2025 fiscal year.

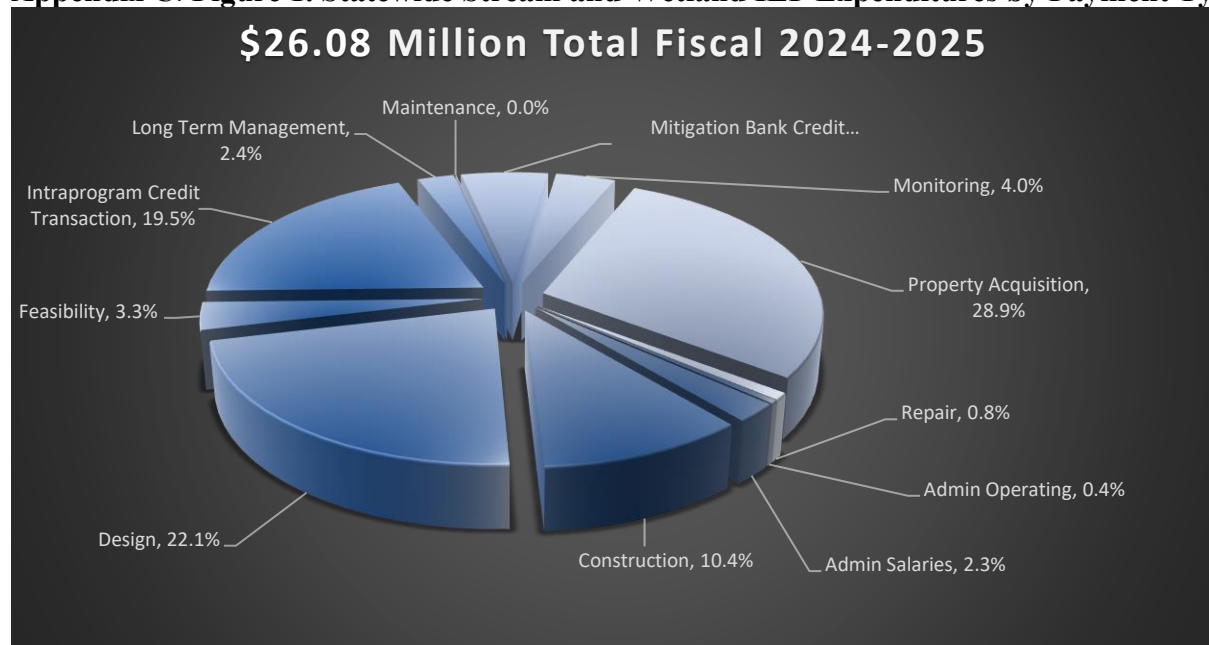
**Table 2. Statewide Stream and Wetland ILF Financials**

<b>Beginning Cash</b>	<b>\$122,825,573.62</b>
Revenues	\$38,418,047.76
Expenditures	\$26,914,283.94
Equity Index Fund	\$2,158,558.17
Bond Index Fund	\$722,270.73
<b>Ending Cash and Cash Equivalents</b>	<b>\$137,210,166.34</b>

In fiscal year 2024-2025, DMS accepted 112 new customer ILF payments into the Statewide Stream and Wetland Program, totaling \$30,569,937.87. These 112 customer payments represent 90 development projects, 37,040.300 stream credits, and 36.813 wetland credits. **Appendix B** provides Statewide Stream and Wetland Program fiscal year 2024-2025 receipts and requirements.

**Figure 1** below summarizes the Ecosystem Restoration Fund expenditures by payment type for the Statewide Stream and Wetland Program. A detailed breakdown of the expenditures is in **Appendix C**.

**Appendix C. Figure 1. Statewide Stream and Wetland ILF Expenditures by Payment Type**





### **Mitigation Bank Credit Costs**

Reporting requirements of G.S. §143 214.13 require DMS to compare project costs with private mitigation bank rates. For this analysis, DMS used the actual submitted prices for mitigation bank credits from requests for bids in the last fiscal year. **Table 3** shows the range in prices for mitigation bank credits in 2024-2025 fiscal year. A complete list of purchased bank credits during 2024-2025 is listed in **Appendix D**.

**Table 3. Mitigation Bank Prices in 2024-2025**

Mitigation Type	Range of Bank Prices per Credit
Stream Mitigation Credits	\$480.25 to \$850.00
Riparian Wetland Mitigation Credits	\$43,500.00 to \$133,554.22
Non-Riparian Wetland Mitigation Credits	\$43,500.00 to \$105,000.00
Coastal Marsh Mitigation Credits	None Submitted
Riparian Buffer Mitigation Credits	\$0.89 to \$7.75
Nitrogen Offset Credits	\$9.57 to \$377.19
Phosphorus Offset Credits	\$135.00 to \$615.00

### **DMS Mitigation Costs**

Recent DMS credit costs were summarized by analyzing full delivery contracts and mitigation bank purchases that DMS awarded over the last three fiscal years. **Table 4** includes project contracts, administration, overhead, and other costs required to complete these projects. The mitigation bank rates from the annual Information for Bid (IFB) requests for the last three years are also summarized. Note that DMS did not contract for any coastal marsh wetland projects in the last three years.

**Table 4. Recent DMS Program Rates and Credit Costs**

Mitigation Type	DMS Program Rates*	Range of Bank Prices per Credit
Stream Mitigation	\$646.12 to \$740.09	\$439.00 to \$850.00
Freshwater Wetland	\$70,939.17 to \$157,232.90	\$43,500.00 to \$133,554.22
Coastal Marsh Wetland	\$757,898.35	None Submitted
Riparian Buffer	\$1.30 to \$6.16	\$0.89 to \$7.75
Nutrient Offset – Nitrogen	\$10.50 to \$149.97	\$9.25 to \$377.19
Nutrient Offset – Phosphorus	\$155.54 to \$640.31	\$135.00 to \$675.00

\* DMS ILF Program mitigation rates are set using the Actual Cost Method, which is a full cost accounting method and may result in premium rates in high-cost watersheds.

