

# **CRS 510 Floodplain Management**

## **2019 Progress Report on Implementation of Credited Plan**

Date: August 1, 2019

Name of Community: New Hanover County

Name of Plan: Southeastern North Carolina Hazard Mitigation Plan

Date Adopted: June 20, 2016

5-year CRS Expiration Date: May 24, 2022

### **1. Availability of Plan**

Copies of the plan are available for review at the New Hanover County Department of Emergency Management and Department of Planning & Land Use. The plan is available for viewing on the Emergency Management website at the following link:

[https://em911.nhcgov.com/wp-content/uploads/2017/03/Approved-Southeastern-NC-Regional-HMP\\_4-26-2016.pdf](https://em911.nhcgov.com/wp-content/uploads/2017/03/Approved-Southeastern-NC-Regional-HMP_4-26-2016.pdf)

### **2. Dissemination of Report:**

This report was prepared by Planning, Emergency Management, Engineering, Strategy, and Cape Fear Public Utility Authority staff after conducting an analysis of implementation strategies specifically related to floodplain management. After review and approval by the County Manager, the 2019 progress report will be shared with the New Hanover County governing body. The report will be submitted to the media through the county's Communications & Outreach office, and the public may obtain this report from the New Hanover County Planning & Land Use Department's website.

### **3. Review of Each Mitigation Action:**

The Southeastern NC Hazard Mitigation Plan is a regional, multi-jurisdictional plan with each county having its own subsection of implementation strategies in addition to 10 regional strategies. New Hanover County has 35 mitigation strategies, and the following tables provide a status update of those strategies pertinent to New Hanover County's floodplain management program.

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| <b>Regional Mitigation Strategy 4</b> | When possible, Participating Counties involved in the Community Rating System (CRS) will aim to leverage efforts regarding compliance with the program. This strategy will attempt to reduce redundancy and staff time investment in establishing and/or maintaining compliance with the updated program.  |
| <b>Review of Mitigation Strategy:</b> | <p>These efforts are ongoing through New Hanover County's participation in the Southeastern NC CRS Users Group, which meets quarterly to discuss and provide assistance with CRS and other floodplain management efforts.</p> <p>In addition, the county participates in grant funded programs (e.g. HMGP, DRA) addressing Hurricane Florence housing recovery that require benefitting homeowners to obtain and maintain flood insurance.</p> |

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| <b>New Hanover County Mitigation Strategy 5</b> | New Hanover County has established a capital project fund to assist with drainage projects located within the unincorporated county. Projects are identified, prioritized, and implemented as necessary to improve drainage to benefit affected property owners. Where required, projects are coordinated with the NC Department of Environmental Quality and the United States Army Corps of Engineers.   |
| <b>Review of Mitigation Strategy:</b>           | <p>The capital project fund continues to address drainage projects within the unincorporated area. The county funded 2 studies to evaluate storm water management in the unincorporated county and project funding needs for a potential storm water utility. The recommendation to establish a storm water utility in the unincorporated area will be brought to the BOCC for consideration at a future meeting.</p> <p>Additionally, in the wake of Hurricane Florence, using FEMA and NFIP data, the county has developed and prioritized projects to improve the performance of all of the major watersheds in the unincorporated county. The county has submitted grant requests to EWP and 29 additional projects totaling \$15.3 million to the HMGP 404 program.</p> |

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| <b>New Hanover County Mitigation Strategy 6</b> | Continue to enforce the NC State Building Code. Local government inspections staff will recertify the NC State Building Code as the adopted local regulation applying to all construction activities on an annual basis. Through enforcement of the NC State Building Code, jurisdictions will work to ensure that all structures, including manufactured homes, are properly anchored to minimize potential impacts stemming from a disaster event. |
| <b>Review of Mitigation Strategy:</b>           | Enforcement of the NC State Building Code continues on an ongoing basis.   |

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| <b>New Hanover County Mitigation Strategy 7</b> | Assist in securing funding to retrofit/elevate wastewater pumping stations located in the 100-year floodplain. These infrastructure components routinely flood during flooding and storm surge events.   |
| <b>Review of Mitigation Strategy:</b>           | CFPUA has mapped all systems, plants and infrastructure in GIS which are in floodplains and could be subject to future SLR. Pump station life-cycle is significantly less than the SLR projection timelines in the 2013 Pilot Study (50, 100 years). As such, current pump station upgrades and future pump stations are designed with flooding and SLR in mind. CFPUA has completed other pump station projects since 2013 that similarly addressed flood elevations as part of an overall upgrade.<br><br>CFPUA has also initiated an Unmanned Aerial Vehicle (UAS/drone) program which will map elevations of all infrastructure (primarily pump stations) to aid with necessary data. That program is operational. |

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| <b>New Hanover County Mitigation Strategy 9</b> | Adopt updated Flood Insurance Rate Map data and Flood Damage Prevention Ordinance. Continue to evaluate Flood Damage Prevention Ordinance to ensure most effective floodplain management practices are being implemented.  |
| <b>Review of Mitigation Strategy:</b>           | Updated Flood Insurance Rate Maps and the Flood Damage Prevention Ordinance were adopted by the Board of County Commissioners on July 9, 2018. Staff regularly evaluates best practices in floodplain management for the consideration of potential amendments to the ordinance. |

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| <b>New Hanover County Mitigation Strategy 10</b> | The New Hanover County Engineering Department will review and revise the Stormwater Ordinance as necessary to address the current conditions located throughout the county. Existing drainage, which is an integral part of stormwater management, is being addressed under NHC5.    |
| <b>Review of Mitigation Strategy:</b>            | Amendments to the Stormwater Ordinance will be incorporated into the county's Unified Development Ordinance project, which is currently ongoing and anticipated to be complete by early 2020. The ordinance will include revisions for the inclusion of a funded Stormwater Utility. |

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| <b>New Hanover County Mitigation Strategy 12</b> | Identify opportunities for acquisition, elevation, retrofitting, and/or reconstruction of hazard prone properties. Continue to notify repetitive loss property owners to see if they are interested in participating in future programs.   |
| <b>Review of Mitigation Strategy:</b>            | The county sends annual notices to repetitive loss and severe repetitive loss property owners to educate them of potential options available for assistance. 62 applications were submitted in 2018-2019 to the HMGP Program for mitigation of hazard prone properties and infrastructure as a result of Hurricane Florence. |

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| <b>New Hanover County Mitigation Strategy 13</b> | Continue to implement the county's public awareness campaign emphasizing the economic benefits of participation in the CRS program. The primary focus of this effort is to educate citizens about the hazards associated with floodplain development.   |
| <b>Review of Mitigation Strategy:</b>            | Public information concerning the economic benefits of participation in the CRS has been created and is available on the county's website. This information is also included on a mailing sent to all residents who own property in Special Flood Hazard Areas in New Hanover County. Press releases were issued this year after official notification of the county's increase to a Class 7 community to provide further public information. |

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| <b>New Hanover County Mitigation Strategy 18</b> | Continue to enforce additional land use regulations in Special Flood Hazard Areas, Areas of Environmental Concern through implementation of Zoning Ordinance, Subdivision Ordinance, Flood Damage Prevention Ordinance, and CAMA Minor Permitting Program. |
| <b>Review of Mitigation Strategy:</b>            | The county's land use regulations and CAMA Minor permitting program are administered and implemented on an ongoing basis.  |

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| <b>New Hanover County Mitigation Strategy 19</b> | Following a storm event, take advantage of opportunities to acquire or purchase land located in storm hazard areas which are rendered unbuildable or have sustained substantial damage, as funding is available. The property should satisfy objectives including, but not limited to, the conservation of open space and scenic areas and the provision of public water access.   |
| <b>Review of Mitigation Strategy:</b>            | The county continues to provide outreach to citizens following storm events to make them aware of pre and post disaster grant opportunities. Following Hurricane Florence, 19 applications for acquisition of property were submitted to the Hazard Mitigation Grant Program. Funding from Emergency Watershed Protection (EWP) will address hurricane debris, vegetation and sediment in the watersheds of the unincorporated county. |

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| <b>New Hanover County Mitigation Strategy 20</b> | Conduct new assessments of hazard areas periodically to address changes to floodplain, shoreline, and inlet conditions caused by natural and man-made forces. This effort will be carried out through periodic Hazard Mitigation, Comprehensive Land Use, Parks & Recreation, and Greenway Master planning efforts. |
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| <p><b>Review of Mitigation Strategy:</b></p> | <p>The county performs annual surveys of approximately 130 cross-shore transects along the county’s ocean front shoreline, emphasizing the coastal storm damage reduction (CSDR) project templates for Wrightsville Beach, Carolina Beach, and Kure Beach. The volumetric calculations are used to assess annual shoreline morphological changes supporting (CSDR) maintenance schedules. The county’s annual and quarterly coordination of inlet management projects are orchestrated through engineering, surveying and dredging elements of the private sector as well as with state and federal agencies.</p> <p>In addition to periodic master planning initiatives, the county regularly assesses changes to floodplain, shoreline, inland flooding and inlet conditions caused by natural and man-made forces following disasters.</p> |
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| <p><b>New Hanover County Mitigation Strategy 21</b></p> | <p>Consider developing innovative approaches to floodplain management including density tradeoffs, cluster development regulations, and additional opportunities for land donation and dedication.</p>  |
| <p><b>Review of Mitigation Strategy:</b></p>            | <p>The New Hanover County Zoning ordinance continues to limit density in Special Flood Hazard Areas, retain Conservation Overlay District standards, and allow cluster development through the performance zoning tool. Staff will be evaluating and considering additional zoning tools to include in land use regulations as part of the Unified Development Ordinance project.</p> |

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| <p><b>New Hanover County Mitigation Strategy 25</b></p> | <p>Encourage new property owners, contractors, real estate agents, builders, developers, and architects to become familiar with NFIP land use and building standards and principles for quality redevelopment and safe housing development through written materials. These materials are available through local building inspections departments, local library branches, and online.</p> |
| <p><b>Review of Mitigation Strategy:</b></p>            | <p>This is an ongoing effort, and educational materials are maintained within the applicable departments, local library branches, and online.</p>   |

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| <b>New Hanover County Mitigation Strategy 28</b> | Maintain a website which provides information about the Regional Hazard Mitigation Plan and relevant mitigation measures the public can take. |
| <b>Review of Mitigation Strategy:</b>            | The Southeastern North Carolina Hazard Mitigation Plan is available on the New Hanover County Department of Emergency Management's website.   |

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| <b>New Hanover County Mitigation Strategy 30</b> | Publicize on county/municipal websites maps of evacuation routes which will facilitate the evacuation of all coastal portions of the county in case of a hazardous event. |
| <b>Review of Mitigation Strategy:</b>            | Information on evacuation routes is maintained on the Department of Emergency Management's website as part of the Ready NHC initiative.                                   |

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| <b>New Hanover County Mitigation Strategy 32</b> | Assist with procurement of additional emergency generators for wastewater pump stations within the floodplain. Assign fixed or portable generators as appropriate for site location.   |
| <b>Review of Mitigation Strategy:</b>            | Of the CFPUA's 150+ pump stations, less than a dozen do not have a fixed or a dedicated assigned portable generator. These rely on commercial power, but are of such small size, generator power is provided on a rotational basis. CFPUA maintains an up-to-date database of all pump-stations with fixed, portable generators assigned, or no generator. |

**4. Implementation - Why any objectives were not reached or why implementation is behind schedule:**

All applicable mitigation strategies were either complete, in progress, or ongoing. The occurrence of Hurricane Florence provided significant data which is being used to re-evaluate or change existing plans (e.g. inclusion of generator design, pad, hookup and telemetry for new/replacement schools that may be used as emergency shelters) and develop new initiatives that support or encourage community resilience.

**5. Recommendations for New Projects or Revised Recommendations:**

Some of the recommended new projects and priorities include:

- Advocating for and seeking funding for projects to elevate portions of I-40 and I-95;
- Advancing strategy for stormwater management on a watershed basis and exploring potential implementation of a storm water utility in the unincorporated area;
- Advancing projects to increase community resilience by increasing the overall stock of affordable and workforce housing outside of the flood zone.

Additional potential new mitigation strategies will be developed with the update to the Regional Hazard Mitigation Plan, which is currently in its beginning stages and is anticipated to be complete in early 2021.