

INTRODUCTION

Throughout the Southeastern NC Region, there are 31 communities out of 32 involved in the Regional Mitigation planning process that participate in the National Flood Insurance Program. Of these, only 14 are participants in the Community Rating System (CRS) – Brunswick County, Calabash, Caswell Beach, Holden Beach, Oak Island, Ocean Isle Beach, Southport, Sunset Beach, New Hanover County, Carolina Beach, Kure Beach, Wrightsville Beach, Pender County, and Topsail Beach. Through the implementation of this plan, all current NFIP participants will consider potential participation in the CRS program. All existing CRS participants will continue to address all practicable CRS activities in an effort to mitigate the impacts of flooding on the respective community.

The following provides a summary of activities discussed throughout the context of the Southeastern NC Regional Hazard Mitigation Plan (RHMP) planning process. Community Rating System (CRS) guidance requires that all activities incorporated or eliminated through the planning process must be summarized in an effort to show that a thorough discussion of potential solutions, policy considerations and capital projects was carried out through the course of plan development. CRS guidance requires that the following six focus areas must be specifically addressed:

- Prevention/Regulatory Standards
- Property Protection Activities
- Protection of Natural/Environmental Functions
- Emergency Services Activities
- Structural Projects
- Public Information Activities

The following summary identifies the activities that have been incorporated or eliminated (refer to Appendix G) from this plan update under each of the above-referenced focus areas. This summary identifies where in the plan these issues are discussed and what current strategies have been defined under the six specified categories.

PREVENTION/REGULATORY STANDARDS

The Southeastern NC RHMP comprehensively addresses the issue of land use/floodplain regulatory standards. This element is accounted for within the context of this plan as follows:

- Section 4: Existing Policies, Programs and Ordinances (page 4-7)
- Section 6: Tables 6-2, 6-3, and 6-4
- Appendix G: Mitigation Progress Report

These sections of the Southeastern NC RHMP outline the utilization and status of policy/regulatory standards for all participating communities. The discussion of documents include the following local ordinances: Flood Damage Prevention Ordinance, North Carolina State Building Code, Subdivision Regulations, and Zoning Regulations. In addition to a summary of how these regulatory tools relate to effective mitigation, a summary of each community's ability to implement, enforce, and carry out the intent of these regulations is provided. Not all communities have adopted and implemented all of these tools (refer

to Tables 4-7 through 4-9) and the potential need for additional regulations at the local level was a key topic of debate during development of the Southeastern NC RHMP.

A review of past mitigation efforts and their relevance to each community's current planning efforts and Floodplain Management Program has been provided in Appendix G: Mitigation Status Report of this plan. A range of alternatives regarding prevention/regulatory tools available to further local mitigation efforts were discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Establishment of floodplain data (statistical and mapping)
- Preservation of open space
- Establishment of floodplain regulations
- Increased setbacks (in relation to defined floodplains)
- Establishment of land development regulations
- Establishment of stormwater management regulations
- Enforcement of building codes
- Investment of capital improvements (drainage and stormwater)

Based on a comprehensive review of possible options under Prevention and Regulatory measures, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System program are outlined in the Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC8, BC9, BC10, BC12, BC14, BC22, BC 24, BC25, BC30, BC31, BC39, BC44
- Southport: BC58
- St. James: BC59
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC6, NHC9, NHC10, NHC15, NHC18, NHC21, NHC33
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC5, PC10, PC11, PC22

PROPERTY PROTECTION ACTIVITIES

The Southeastern NC RHMP comprehensively addresses the issue of Property Protection. This element is accounted for within the context of this plan as follows:

- Section 4: Agency Organizational Review, Community Capability Assessment, Legal Capability Review, Fiscal Capability Review, Political Acceptability Review
- Section 5: Critical Facilities, Repetitive Loss Structures, Key Issues Regarding Thunderstorms/Windstorms, Lightning and Hail, Change in Land Use Form
- Section 6: Tables 6-2, 6-3, and 6-4, Summary of CRS Rating of Strategies
- Appendix G: Mitigation Progress Report

These sections of the Southeastern NC RHMP provide an overview of each participating jurisdictions efforts to provide services and outreach aimed at reducing the vulnerability of the community to natural disasters, in particular severe flooding events. Each participating NFIP community has a responsibility to educate the public and regulate development throughout defined flood hazard areas. Although not all communities are participants, each County maintains a comprehensive Inspections Department charged with addressing these issues.

Those communities that are currently CRS participants continue to maintain a more stringent Mitigation/Flood Management Planning Program. These efforts are detailed throughout the sections outlined above and serve to provide pre- and post-disaster services relating to development and redevelopment within portions of each County recognized as Flood Hazard Areas by FEMA.

A review of past mitigation efforts and their relevance to each community's current planning efforts and Floodplain Management Program has been provided in Appendix G: Mitigation Progress Report. A range of alternatives regarding Property Protection efforts available to further local mitigation programs were discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Relocation
- Acquisition
- Structural Elevation
- Retrofitting
- Infrastructure Protection/Elevation/Relocation
- Insurance Rate Reduction

Based on a comprehensive review of possible options under Property Protection activities, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC13, BC17, BC23, BC26, BC28
- Bald Head Island: BC54
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC7, NHC12, NHC19, NHC20
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC2, PC4, PC6, PC9, PC21, PC24, PC25, PC28

PROTECTION OF NATURAL/ENVIRONMENTAL FUNCTIONS

The Southeastern NC RHMP comprehensively addresses the issue of Protecting Natural/Environmental Functions. This element is accounted for within the context of this plan as follows:

- Section 3: Hazard Identification and Analysis
- Section 4: Community Capability Assessment
- Section 5: Vulnerability Assessment
- Section 6: Tables 6-2, 6-3, and 6-4, Summary of CRS Rating of Strategies
- Appendix G: Mitigation Progress Report

The discussion of protecting natural/environmental functions throughout this plan is folded into the review of other activities and functions, in particular the overview of policy and regulatory controls. A majority of environmental protection efforts are handled through either ongoing stewardship efforts or regulatory controls (i.e., stormwater regulations).

A review of past mitigation efforts and their relevance to each community's current and past environmental protection efforts has been provided in Appendix G, Mitigation Progress Report of this plan. A range of alternatives regarding environmental protection were discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Wetlands protection
- Water quality improvement
- Erosion and sediment control
- Coastal barrier protection
- Natural area preservation
- Environmental corridors
- Natural area restoration
- Natural functions protection

Based on a comprehensive review of possible options under Protection of Natural/Environmental functions, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC4, BC6, BC18, BC19, BC20, BC27, BC32, BC40, BC41, BC42, BC53
- St. James: BC60
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC8, NHC34
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC8, PC27

EMERGENCY SERVICES ACTIVITIES

The Southeastern NC RHMP comprehensively addresses the issue of emergency services activities. This element is accounted for within the context of this plan as follows:

- Section 4: Agency/Organizational Review, Community Capability Assessment
- Section 5: Critical Facilities, Key Issues Regarding Thunderstorms/Windstorms, Lightning, and Hail
- Section 6: Tables 6-2, 6-3, and 6-4
- Appendix G: Mitigation Progress Report

The Southeastern RHMP involves an overview of emergency management activities and services that relate to pre- and post-disaster recovery efforts. Although emergency management does not tie directly into long range mitigation planning, response capabilities do serve a vital role in minimizing the threat to life and property during and immediately following severe flooding events. The mitigation planning process provides a linkage between regional/local Emergency Management, Land Use, and Mitigation Planning efforts.

A review of past mitigation efforts and their relevance to each community's current and past emergency service activities has been provided within Appendix G, Mitigation Progress Report of this plan. A range of alternatives regarding environmental protection were discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Hazard threat recognition
- Critical facilities protection
- Hazard warning
- Health and safety maintenance
- Hazard response operations
- Post-disaster mitigation actions

Based on a comprehensive review of possible options under Emergency Services activities, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC5, BC21, BC29, BC33, BC34, BC35, BC36, BC37, BC38, BC46, BC49, BC50, BC51, BC52
- Bald Head Island: BC55
- Sunset Beach: BC62, BC63
- Ocean Isle Beach: BC66
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC1, NHC3, NHC22, NHC23, NHC24, NHC27, NHC28, NHC31, NHC32, NHC35
- Wilmington: NHC36, NHC37
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC1, PC3, PC14, PC17, PC19, PC20, PC23

STRUCTURAL PROJECTS

The Southeastern NC RHMP comprehensively addresses the issue of structural mitigation projects. This element is accounted for within the context of this plan as follows:

- Section 4: Community Capability Assessment
- Section 5: Critical Facilities, Key Issues Regarding Thunderstorms/Windstorms, Lightning, and Hail
- Section 6: Tables 6-2, 6-3, and 6-4
- Appendix G: Mitigation Progress Report

The discussion of structural mitigation projects is very similar to the overview of property protection measures discussed above. In terms of the overall review of activities, the planning team considered these issues in conjunction with one another, therefore, the specific portions of the plan relevant to this issue are summarized in similar fashion. It should be noted that the only significant structural project, aside from building elevation, relates to storm drainage system improvements. In many cases stormwater drainage problems are caused by roadway/highway drainage problems that do not fall under the jurisdiction of the local unit of government.

A review of past mitigation efforts and their relevance to each community's current planning efforts and Floodplain Management Program has been provided within Appendix G, Mitigation Progress Report of this plan. A range of alternatives regarding structural mitigation projects was discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Reservoirs
- Channel modifications
- Levees/floodwalls
- Storm drain improvement

Based on a comprehensive review of possible options under Structural Mitigation projects, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC2, BC3, BC11, BC15, BC16
- Holden Beach: BC56
- Northwest: BC57
- Sunset Beach: BC61
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC5, NHC11, NHC16, NHC29
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC7, PC26

PUBLIC INFORMATION ACTIVITIES

The Southeastern NC RHMP comprehensively addresses the issue of public information activities. This element is accounted for within the context of this plan as follows:

- Section 4: Community Capability Assessment
- Section 6: Tables 6-2, 6-3, and 6-4
- Section 7: Plan Maintenance & Implementation Procedures
- Appendix G: Mitigation Progress Report

The issue of public education and outreach is critical to both an effective mitigation program and participation in the CRS program. Each community participating in this plan, especially those participating in the NFIP program carry out a range of activities aimed at furthering the public's understanding of floodplain management and protection. These efforts range from engaging the public through outreach activities to mailing out literature to increase awareness about public safety regarding floodplains.

A review of past mitigation efforts and their relevance to each community's current planning efforts and Floodplain Management Program has been provided in Appendix G, Mitigation Progress Report of this plan. A range of alternatives regarding public education and awareness was discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Map information
- Library
- Outreach projects
- Technical assistance
- Real estate disclosure
- Environmental education

Based on a comprehensive review of possible options under Public Information activities, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

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- Ocean Isle Beach: BC65
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC2, NHC4, NHC13, NHC14, NHC17, NHC25, NHC26, NHC30
- Wilmington: NHC38
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC12, PC13, PC15, PC16, PC18