

SECTION 2

PLANNING PROCESS

This section describes the planning process undertaken to develop the 2021 update of the Southeastern NC Regional Hazard Mitigation Plan.

This section consists of the following nine subsections:

- ◆ 2.1 Overview of Hazard Mitigation Planning
- ◆ 2.2 History of Hazard Mitigation Planning in the Southeastern NC Region
- ◆ 2.3 Updating the Plan in 2020/2021
- ◆ 2.4 The Southeastern NC Regional Hazard Mitigation Planning Committee
- ◆ 2.5 Community Meetings and Workshops
- ◆ 2.6 Involving the Public
- ◆ 2.7 Involving the Stakeholders
- ◆ 2.8 Documentation of Plan Progress
- ◆ 2.9 Southeastern NC Region CRS Planning Process Documentation

44 CFR Requirement

44 CFR Part 201.6(c)(1): The plan shall include documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process and how the public was involved.

2.1 OVERVIEW OF HAZARD MITIGATION PLANNING

Local hazard mitigation planning is the process of organizing community resources, identifying and assessing hazard risks, and determining how to best minimize or manage those risks. This process culminates in a hazard mitigation plan that identifies specific mitigation actions, each designed to achieve both short-term planning objectives and a long-term community vision.

To ensure the functionality of a hazard mitigation plan, responsibility is assigned for each proposed mitigation action to a specific individual, department, or agency along with a schedule or target completion date for its implementation (see Section 9: *Mitigation Action Plans*). Plan maintenance procedures are established for the routine monitoring of implementation progress, as well as the evaluation and enhancement of the mitigation plan itself. These plan maintenance procedures ensure that the Plan remains a current, dynamic, and effective planning document over time that becomes integrated into the routine local decision-making process (see Section 10: *Plan Maintenance*).

Communities that participate in hazard mitigation planning have the potential to accomplish many benefits, including:

- ◆ saving lives and property,
- ◆ saving money,
- ◆ speeding recovery following disasters,

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- ◆ reducing future vulnerability through wise development and post-disaster recovery and reconstruction,
- ◆ expediting the receipt of pre-disaster and post-disaster grant funding, and
- ◆ demonstrating a firm commitment to improving community health and safety.

Typically, mitigation planning is described as having the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of hazard mitigation is that the investments made before a hazard event will significantly reduce the demand for post-disaster assistance by lessening the need for emergency response, repair, recovery, and reconstruction. Furthermore, mitigation practices will enable local residents, businesses, and industries to re-establish themselves in the wake of a disaster, getting the community economy back on track sooner and with less interruption.

The benefits of mitigation planning go beyond solely reducing hazard vulnerability. Mitigation measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals, such as preserving open space, maintaining environmental health, and enhancing recreational opportunities. Thus, it is vitally important that any local mitigation planning process be integrated with other concurrent local planning efforts, and any proposed mitigation strategies must take into account other existing community goals or initiatives that will help complement or hinder their future implementation.

2.2 HISTORY OF HAZARD MITIGATION PLANNING IN THE SOUTHEASTERN NC REGION

Prior to the development of the initial Southeastern NC Regional Hazard Mitigation Plan in 2016, each of the three counties and jurisdictions that originally participated in the regional plan (Brunswick, New Hanover and Pender Counties) had previously adopted separate county-level hazard mitigation plans. Each of the county-level plans was developed using the multi-jurisdictional planning process recommended by the Federal Emergency Management Agency (FEMA).

For the development of the original regional plan, the aforementioned three counties, and a handful of municipalities that were maintaining their own separate plans, joined to develop the Southeastern NC Regional Hazard Mitigation Plan. The regional plan was developed in order to simplify planning efforts for the jurisdictions in the Southeastern NC Region and allowed resources to be shared amongst the participating jurisdictions to ease the administrative duties of all of the participants by combining the three existing County-level plans and a few municipal plans into one multi-jurisdictional plan. The 2016 plan was an important and successful first start for regional hazard mitigation planning efforts and that success has carried over into the 2020 update of the plan.

For the 2021 update, Onslow County and the municipalities within the County joined the Southeastern NC Regional Hazard Mitigation Plan. Until this update of the regional plan, Onslow County has had a separate plan for the County and the municipal jurisdictions within the County.

2.3 UPDATING THE PLAN IN 2020/2021

FEMA requires that hazard mitigation plans be updated every five years to remain eligible for federal mitigation and public assistance funding. To prepare the 2021 *Southeastern NC Regional Hazard Mitigation Plan*, ESP Associates, Inc. was hired by North Carolina Emergency Management to provide professional mitigation planning services for the plan update effort. Per the contractual scope of work, the consultant team followed the mitigation planning process recommended by FEMA (Publication Series 386 and Local Mitigation Plan Review Guide) and recommendations provided by North Carolina Emergency Management (NCEM) mitigation planning staff¹. Additionally, for the 2020 update, FEMA Community Rating System (CRS) and Community Wildfire Protection Plan (CWPP) requirements were integrated into the plan update.

Tables 2.1 and 2.2 below provide an overview of how the Community Rating System and Community Wildfire Protection Plan requirements were integrated into this plan update.

TABLE 2.1 FEMA HAZARD MITIGATION PLANNING REQUIREMENTS AND THE CRS 10-STEP PLANNING PROCESS REFERENCE TABLE

FEMA Disaster Mitigation Act Requirement	CRS Activity 510 Planning Requirement
Phase I – Planning Process	
§201.6(c)(1)	Step 1: Organize to Prepare the Plan
§201.6(b)(1)	Step 2: Involve the Public
§201.6(b)(2) & (3)	Step 3: Coordinate
Phase II – Risk Assessment	
§201.6(c)(2)(i)	Step 4: Assess the Hazard
§201.6(c)(2)(ii) & (iii)	Step 5: Assess the Problem
Phase III – Mitigation Strategy	
§201.6(c)(3)(i)	Step 6: Set Goals
§201.6(c)(3)(ii)	Step 7: Review Possible Activities
§201.6(c)(3)(iii)	Step 8: Draft an Action Plan
Phase IV – Plan Maintenance	
§201.6(c)(5)	Step 9: Adopt the Plan
§201.6(c)(4)	Step 10: Implement, Evaluate and Revise the Plan

TABLE 2.2 COMMUNITY WILDFIRE PROTECTION PLAN PROCESS INTEGRATION REFERENCE TABLE

CWPP Process	Hazard Mitigation Plan Integration Reference
Step 1: Convene Decisionmakers	Section 2: Planning Process
Step 2: Involve Federal Agencies	Section 2: Planning Process
Step 3: Engage Interested Parties	Section 2: Planning Process
Step 4: Establish a Community Base Map	Section 3: Community Profile
Step 5: Develop a Community Risk Assessment	Sections 4, 5 and 6: Hazard Identification, Hazard Profiles and Vulnerability Assessment Section 7: Capability Assessment

¹ A copy of the negotiated contractual scope of work between NCEM and ESP is available through NCEM upon request.

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CWPP Process	Hazard Mitigation Plan Integration Reference
Step 6: Establish Community Hazard Reduction Priorities and Recommendations to Reduce Structural Ignitability	Section 8: Mitigation Strategy
Step 7: Develop an Action Plan and Assessment Strategy	Section 9: Mitigation Action Plans Section 10: Plan Maintenance
Step 8: Finalize the CWPP	Appendix A: Plan Adoption

Source: *Preparing a Community Wildfire Protection Plan – A Handbook for Wildland-Urban Interface Communities*

The Local Mitigation Plan Review Tool, found in Appendix C, provides a detailed summary of FEMA’s current minimum standards of acceptability for compliance with DMA 2000 and notes the location where each requirement is met within this Plan. These standards are based upon FEMA’s Final Rule as published in the Federal Register in Part 201 of the Code of Federal Regulations (CFR). The planning team used FEMA’s Local Mitigation Plan Review Guide (October 2011) for reference as they completed the Plan.

For the development of the 2021 plan, all of the aforementioned jurisdictions that participated in the development of the previous regional plan participated in this plan’s development and Onslow County and the municipalities within the County agreed to join the regional plan. None of the previous participating jurisdictions have been removed from the plan.

The process used to prepare this Plan included twelve major steps that were completed over the course of approximately nine months beginning in July 2019. Each of these planning steps (illustrated in **Figure 2.1**) resulted in critical work products and outcomes that collectively make up the Plan. Specific plan sections are further described in Section 1: *Introduction*.

FIGURE 2.1: MITIGATION PLANNING PROCESS FOR THE SOUTHEASTERN NC REGION



2.4 THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLANNING COMMITTEE

In order to guide the initial development of this Plan and this subsequent update, the participating jurisdictions created the Southeastern NC Regional Hazard Mitigation Planning Committee. The Regional Hazard Mitigation Committee represents a community-based planning team made up of representatives from various county departments, municipalities, and other key stakeholders identified to serve as critical partners in the planning process.

Beginning in July 2019, the Regional Hazard Mitigation Planning Committee members engaged in regular discussions as well as local meetings and planning workshops to discuss and complete tasks associated with preparing the Plan. This working group coordinated on all aspects of plan preparation and provided valuable input to the process. In addition to regular meetings, committee members routinely communicated and were kept informed through an e-mail distribution list.

Specifically, the tasks assigned to the Regional Hazard Mitigation Planning Committee members included:

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- ◆ participate in Regional Hazard Mitigation Planning Committee meetings and workshops
- ◆ provide best available data as required for the risk assessment portion of the Plan
- ◆ help update the Capability Assessment section of the plan and provide copies of any mitigation or hazard-related documents for review and incorporation into the Plan
- ◆ support the update of the Mitigation Strategy, including the review, update and adoption of regional goal statements
- ◆ help update existing mitigation actions and design and propose any appropriate new mitigation actions for their department/agency for incorporation into the Mitigation Action Plan
- ◆ review and provide timely comments on all study findings and draft plan deliverables
- ◆ support the adoption of the 2021 *Southeastern NC Regional Hazard Mitigation Plan*

Table 2.3 lists the members of the Regional Hazard Mitigation Planning Committee who were responsible for participating in the development of the Plan.

TABLE 2.3: MEMBERS OF THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLANNING COMMITTEE

NAME	DEPARTMENT / AGENCY / TITLE
Brunswick County*	
Garner, Scott	Emergency Services/Fire Marshal, Deputy Director
Hackney, Brandon	Planning, Project Planner
Pages, Marc	Planning, Senior Planner
Shirk, John	Floodplain Management, Floodplain Manager
Bald Head Island	
Boyett, Stephen	Village Building Inspector/Floodplain Manager
Belville	
Hewlett, Brenda	Administrative Support Specialist
Page, Cheryl	Finance Clerk
Boiling Spring Lakes	
Morgan, Nicole	Planning and Zoning Administrator/Floodplain Manager
Mack, Michael	Public Works Director
Lathrop, Bill	Code Enforcement Officer
Calabash	
Nance, Charles	Town Administrator
Carolina Shores	
Wood, Sandy	Inspections and Construction Superintendent
Caswell Beach*	
Hicks, Chad	Town Administrator
Holden Beach*	
Evans, Timothy Dale	Planning and Inspections Director
Wooten, Rhonda	CAMA/Zoning Official
Leland	
Andrea, Ben	Planning and Inspections Director
Grimes, John	Fire/Rescue/EMS Chief
Hayes, Ronnie	Fire/Rescue/EMS Deputy Chief

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NAME	DEPARTMENT / AGENCY / TITLE
Navassa	
Sutton, Barnes	Planning and Development Director
Oak Island*	
Edwards, Steve	Development Services Director
Kelly, David	Town Manager
Vares, Jake	Planning and Zoning Administrator
Ocean Isle Beach*	
Dycus, Keith	Development Services Specialist
Whiteside, Justin	Assistant Town Administrator
Shalotte	
Waring, Robert	Assistant Town Manager
Southport*	
Lloyd, Thomas	City Planner
St. James	
Dickie, James	Town Manager
Sunset Beach*	
Rademacher, Todd	Planning Director
New Hanover County*	
Still, Steven	Emergency Management Director
Skinner, Kristen	Emergency Management Specialist
McRay, Anna	Emergency Management Deputy Director
Oelslager, Kate	Communications and Outreach Coordinator
Griffin, Heather	SHPR/NHRMC
Iannucci, Jim	Engineering
Howard, David	HHS Public Health and Safety
Spencer, Dave	New Hanover County Schools
Brown, Lisa	Brunswick and New Hanover Public Health
Cottle, Deborah	New Hanover County 911
Ellis, Bruce	New Hanover County WebEOC Coordinator
Guendner, Rosemary	New Hanover County EM (MPA Fellow)
Baldwin, Eliza	Strategy Analyst
Loeper, Jessica	Chief Communications Officer
Meyer, Frank	New Hanover County Fire
Smith, Jennifer	New Hanover County Fire
Davis, Matt	New Hanover County Fire
Wayne, Martha	Deputy Chief Financial Officer
Roth, Rebecca	Long Range Planning, Senior Planner
Vafier, Ken	Planning Manager
Evers, Brian	New Hanover County Sheriff's Office
Carolina Beach *	
Murphy, Miles	Planner
Abbotts, Gloria	Graduate Fellow
Wilmington	
Vincent, Natosha	Wilmington Fire Department
Mason, Steve	Wilmington Fire Department

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NAME	DEPARTMENT / AGENCY / TITLE
Martinette, Buddy	Wilmington Fire Department
Harris, Craig	Wilmington Planning
Kennedy, Benjamin	Wilmington Police Department
Oyler, David	Wilmington Police Department
Wrightsville Beach*	
Welsh, Trevor	Building Inspector
Pender County	
Henley, Travis	Senior Planner
Shore, Sam	Planner II Long Range Planner
Adams, Daniel	Floodplain Manager
Breuer, Kyle	Planning Director (Former)
Woodruff, Randell	County Manager (Former)
Burgaw	
Correll, Andrea	Planning Director
Surf City	
Batts, Teresa	
Horne, James	Emergency Management Director
Topsail Beach	
Rose, Michael	Town Manager
Vescovi, Linda	Planning Director
Onslow County*	
Bryson, Norman	Emergency Management, Director
Miles, Stacie	Emergency Management, Deputy Director
Rhue, Jessica	Planning Director
George, Shawn	Sheriff's Office
Turner, Kevin	Appraisal Supervisor
Hagopien, Angelica	GIS Specialist
Warren, Ben	Assistant County Manager
Holland, Jane	GIS Specialist
Myers, Steve	Onslow County Schools
Pike, Patricia	GIS Director
Davis, Charles	Deputy Director
Holly Ridge	
McFann, Mike	Public Works Director
Morrison, Kenneth	Building Inspections Director
Jacksonville*	
Hayes, Shaun	Jacksonville Fire, Assistant Fire Chief
Tallman, Tee	Jacksonville Fire, Fire Chief
Procopio, Amy	Jacksonville Fire, Battalion Chief
Massey, Ron	Deputy City Manager
North Topsail Beach*	
Hill, Deb	Planning Director
Richlands	
Whitehead, Gregg	Town Administrator
Swansboro	

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NAME	DEPARTMENT / AGENCY / TITLE
Ansell, Jessica	Planner
Seaberg, Chris	Town Manager
Southeastern NC Regional CRS Steering Committee	
Sylvia, Lynn	Cape Fear Community College
Buschfort, Erin	WH
Carr, Paul	NHRMC
Kasulis, Aaron	NHREMS
Brown, Warren	NHREMS
Streba, Catrina	NHRMC EM
Hart, Audrey	New Hanover Disaster Coalition
Moran, Will	USCG
Brunetti, Jayna	USCG
Johnson, Thomas	USCG
Hatcher, Eric	CFPUA
Eckert, Beth	CFPUA
Edwards, Hans	Southeastern Healthcare Preparedness Region
Reyes, Frances	Harrelson Center/HelpHub/NHDC
Venters, Mark	GE-Hitachi Nuclear
Taylor, Tommy	United Way CFA
White, Chris	Onslow County Albert J Ellis Airport
Harpinea, Annette	Coastal Carolina Community College
Fullerton, John	Water Resources Private Consultant
Peterson, Ginny	New Hanover Disaster Coalition
Register, Stan	State of NC – Fort Fisher
Ruskin, Jodie	UNCW
Thompson, Michael	American Red Cross
Garner, Scott	Emergency Services/Fire Marshal, Deputy Director – Brunswick County
Shirk, John	Floodplain Manager – Brunswick County
Evans, Timothy Dale	Planning and Inspections Director – Holden Beach
Wooten, Rhonda	CAMA/Zoning Official – Holden Beach
Edwards, Steve	Development Services Director – Oak Island
Kelly, David	Town Manager – Oak Island
Dycus, Keith	Development Services Specialist – Ocean Isle Beach
Whiteside, Justin	Assistant Town Administrator – Ocean Isle Beach
McRay, Anna	Emergency Management Deputy Director – New Hanover County
Vafier, Ken	Planning Manager – New Hanover County
Murphy, Miles	Planner – Carolina Beach
Abbotts, Gloria	Graduate Fellow – Carolina Beach
Miles, Stacie	Emergency Management, Deputy Director – Onslow County
Rhue, Jessica	Planning Director – Onslow County
Lloyd, Thomas	City Planner - Southport

*Indicates CRS Communities

Table 2.4 lists points of contact for several of the jurisdictions who elected to designate their respective county officials to represent their jurisdiction on the planning team, generally because they did not have the time or staff to be able to attend on their own. Although these members designated county officials to represent them at in-person meetings, each was still contacted throughout the planning process and participated by providing suggestions and comments on the Plan, updates to mitigation actions and the Capability Assessment via email and phone conversations. These members are listed below by municipality.

TABLE 2.4: MEMBERS DESIGNATING REPRESENTATIVES TO THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLANNING TEAM

NAME	DEPARTMENT / AGENCY / TITLE
Brunswick County	
Marston, Ella Jane	Mayor, Bolivia
Strickland, Donna	City Clerk, Northwest
Evans, Marion	Town Clerk, Sandy Creek
Kirby, William S.	Mayor, Varnamtown
New Hanover County	
Sanders, Mandy	Town Clerk, Kure Beach*
Pender County	
	Atkinson
	Burgaw
	St. Helena
	Topsail Beach*
	Watha

*Indicates CRS community

Additional participation and input from other identified stakeholders and the general public was sought by the participating counties during the planning process through phone calls and the distribution of emails, advertisements and public notices aimed at informing people on the status of the Hazard Mitigation Plan (public and stakeholder involvement is further discussed later in this section).

2.4.1 Multi-Jurisdictional Participation

The Southeastern NC Regional Hazard Mitigation Plan includes four counties and thirty-four incorporated municipalities. To satisfy multi-jurisdictional participation requirements, each county and its participating jurisdictions were required to perform the following tasks:

- ◆ Participate in mitigation planning workshops;
- ◆ Identify completed mitigation projects, if applicable; and
- ◆ Develop (and/or update) and adopt their local Mitigation Action Plan.

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Each jurisdiction participated in the planning process and has developed a local Mitigation Action Plan unique to their jurisdiction. This provides the means for jurisdictions to monitor and update their Plan on a regular basis.

2.5 COMMUNITY MEETINGS AND WORKSHOPS

The preparation of this Plan required a series of meetings and workshops for facilitating discussion, gaining consensus and initiating data collection efforts with local government staff, community officials, and other identified stakeholders. More importantly, the meetings and workshops prompted continuous input and feedback from relevant participants throughout the drafting stages of the Plan.

The following is a summary of the key meetings and community workshops held during the development of the plan update.² In many cases, routine discussions and additional meetings were held by local staff to accomplish planning tasks specific to their department or agency, such as the approval of specific mitigation actions for their department or agency to undertake and include in the Mitigation Action Plan.

2.5.1 Meeting Minutes

Meeting Minutes from Internal Kickoff Conference Call/Skype Meeting with County Leads and NCEM Representatives

July 9, 2019

Phone Call/Skype Meeting

Nathan Slaughter, Hazard Mitigation Department Manager from ESP Associates, Inc. and Project Manager for the update of the Southeastern NC Regional Hazard Mitigation Plan, began the meeting by welcoming the attendees and giving a brief overview of the project and the purpose of the meeting.

Mr. Slaughter recognized all of the participating counties and members from NCEM and FEMA. All counties were represented. Mr. Slaughter then explained new project information, which included funding and grant information, the addition of Onslow County to the region, and that there was no local match requirement for this update.

Next, Mr. Slaughter gave a brief mitigation refresher and reviewed both the Disaster Mitigation Act of 2000 and NC Senate Bill 300. He explained two ways of how we should think about mitigation: we want to mitigate hazard impacts of existing development in the community (houses, businesses, critical facilities, etc.), and ensure that future development is conducted in a way that doesn't increase vulnerability. He also introduced the six hazard mitigation techniques and provided examples of each. The key objectives of the update were shared: coordinate between four counties; update the plan to demonstrate progress and reflect current conditions; increase public education and awareness; maintain grant eligibility for participating jurisdictions; update the plan in accordance with Community Rating System (CRS) requirements; and maintain compliance with State and Federal requirements.

² Copies of agendas, sign-in sheets, minutes, and handout materials for all meetings and workshops can be found in Appendix D.

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Mr. Slaughter then explained new elements that will be included in this update, such as the NCEM Risk Management Tool, CRS 510 compliance, Risk MAP products, Community Wildfire Protection Plan elements, and the Resilience Assessment.

The elements of the planning process were shared and explained, and the hazards identified in the State of North Carolina Hazard Mitigation Plan were reviewed. Next, the project schedule was shared and the roles and responsibilities of ESP Associates, county leads, and participating jurisdictions were explained in detail.

Finally, Mr. Slaughter gave the group the link to the public survey. The group then discussed the next steps; due to the number of participating communities, all were in agreement to initially hold a regional meeting with all counties, and then to hold individual countywide meetings or follow-up discussions, as needed, to update the mitigation strategy.

Mr. Slaughter thanked everyone for their participation and the call was ended.

Meeting Minutes from Southeastern NC Regional Hazard Mitigation Planning Committee Kickoff Meeting Cape Fear Community College, Union Station Auditorium September 18, 2019

Nathan Slaughter, began the meeting by welcoming the attendees and giving a brief overview of the project and the purpose of the meeting.

Mr. Slaughter led the meeting of the Regional Hazard Mitigation Planning Team and began by having attendees introduce themselves by indicating if they were representing County, municipal or other stakeholders. The 79 attendees included representatives from various departments and local jurisdictions within each of the four counties participating in the plan update and a variety of other stakeholders. All four counties were represented. Mr. Slaughter then provided an overview of the items to be discussed at the meeting and briefly reviewed the agenda and presentation slide handouts. He then defined mitigation and gave a review of the Disaster Mitigation Act of 2000 and NC Senate Bill 300.

To continue, Mr. Slaughter provided detailed information about the project. He mentioned that the project is funded by a FEMA HMGP grant, and that NCEM was managing the planning effort and had assigned ESP Associates, Inc. to manage the update. For this update, there was no local funding required.

Mr. Slaughter then explained some of the basic concepts of mitigation. He explained how we should think about mitigation: we want to mitigate hazard impacts of existing development in the community (houses, businesses, critical facilities, etc.), and ensure that future development is conducted in a way that doesn't increase vulnerability. This can be achieved by having good plans, policies, and procedures in place.

Following the overview, Mr. Slaughter led the group in an "icebreaker" exercise to refamiliarize meeting participants with various mitigation techniques. He briefly recapped the six different categories of

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mitigation techniques: emergency services, prevention, natural resource protection, structural projects, public education and awareness, and property protection. Each attendee was then given \$20 in mock currency and asked to “spend” their mitigation money as they personally deemed appropriate among the six mitigation categories. Money was “spent” by placing it in cups labeled with each of the mitigation techniques. The money was tabulated and it was determined that the most money was spent on prevention.

After the icebreaker exercise, Mr. Slaughter reviewed the key objectives of the project, which are to:

- Coordinate between the four participating counties to update the regional plan
- Update the plan to demonstrate progress and reflect current conditions
- Complete the update before the existing plan expires on April 24, 2021
- Increase public awareness and education
- Maintain grant eligibility for participating jurisdictions
- Update the plan in accordance with Community Rating System (CRS) requirements, and
- Maintain compliance with State and Federal requirements

Next, he explained new elements to this update, which include integrating with NCEM’s RMT, Activity 510 compliance for CRS communities, Risk MAP, Community Wildfire Protection Plans, the NC Resilience Assessment, and EMAP compliance.

Mr. Slaughter reviewed the list of participating jurisdictions with the group, which all agreed to participate again. He also explained the planning process and specific tasks to be accomplished for the project, which include the planning process, risk assessment, capability assessment, mitigation strategy, mitigation action plan, and plain maintenance procedures. For the risk assessment portion of the process, Mr. Slaughter asked each county to designate a point of contact to coordinate the gathering of GIS data required for the analysis. He also reviewed the list of identified hazards and the committee agreed to maintain the previous list of hazards for the four counties.

The project schedule was presented and Mr. Slaughter noted that the twelve-month schedule provided ample time to produce a quality plan and meet state and federal deadlines.

Mr. Slaughter discussed what data would need to be collected to complete the project. This includes GIS Data, Capability Assessment Revisions, a Public Participation Survey, and updates to existing Mitigation Actions.

Mr. Slaughter then reviewed the roles and responsibilities of ESP Associates, Inc, the County leads, and the participating jurisdictions. The presentation concluded with a discussion of the next steps to be taken in the project development. He encouraged meeting participants to distribute the Public Participation Survey. The next HMPT meeting was scheduled for some time in February 2020 to discuss the findings of the risk and capability assessments and to begin updating existing mitigation actions and identify new goals.

FIGURE 2.2: SOUTHEASTERN NC KICKOFF MEETING



**Meeting Minutes from Mitigation Strategy Meeting
February 11, 2020
New Hanover County Public Library – Northeast Branch
10:00 AM – Noon**

Nathan Slaughter, Project Manager from ESP Associates, began the meeting by welcoming the attendees and reviewing the meeting handouts, which included an agenda and a hard copy of the meeting presentation. Mr. Slaughter asked meeting attendees to introduce themselves and gave a refresher on mitigation, why we plan, and the key objectives of the project. He reviewed the participating jurisdictions, project tasks and project schedule. He stated that a draft of the updated Regional Hazard Mitigation Plan would be presented in April 2020.

Mr. Slaughter then presented the findings of the risk assessment. He shared the list of all hazards that are addressed in the regional plan, and reviewed the list of hazards addressed in the North Carolina State Hazard Mitigation Plan. He discussed how the hazards in the regional plan would be revised to align with the hazards in the State Plan. This would include the addition of manmade hazards and technological hazards. He discussed a couple of caveats for the risk assessment and indicated that best

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available data was used. While that information is helpful, events are often under-reported, so it is important to keep the end goal in sight. The purpose of the risk assessment was shared: to compare hazards and determine which should be the focus of the mitigation actions. Finally, he mentioned to the stakeholders that it ultimately is their risk assessment, so their recommendations for adjustment are welcomed and encouraged.

Mr. Slaughter stated that since the last plan was updated, there have been four Presidential disaster declarations that have impacted the region, which helped emphasize the need to continue updating the mitigation plan.

The following Hazard Profiles and summaries of each hazard were then shared:

- **FLOOD:** There have also been 26,243 reported NFIP losses since 1978 and approximately \$329 million in claims. There are 1,424 repetitive loss properties, and future occurrences are highly likely.
- **HURRICANE AND COASTAL HAZARDS:** 127 storm tracks have come within 75 miles of the region since 1850. 93 of those were classified as a hurricane or tropical storm. Future occurrences are likely.
- **EROSION:** There are two primary types of erosion in the region: coastal and riverine. Beach nourishment and dune stabilization can help mitigate erosion. Future occurrences are likely.
- **SEVERE WINTER WEATHER:** 31 winter weather events have been reported for the region between 1996-2018. Future occurrences are highly likely.
- **EXCESSIVE HEAT:** There have been 13 excessive heat events reported in the region between 1996-2019. Future occurrences are likely.
- **WILDFIRE:** Wildfire is a hazard of concern for the region, which is one of the most at risk areas in the State. Future occurrences are likely.
- **DAM FAILURE:** Of the 29 dams in the region, 9 are considered high hazard dams. The most serious breach in the region occurred in Boiling Spring Lakes. Future occurrences are unlikely.
- **DROUGHT:** There were 19 regional drought events between 2000 and 2018, and future occurrences are likely.
- **TORNADOES:** There have been 131 recorded events since 1950, causing \$24,425,250 in property damage. Future occurrences are likely.
- **SEVERE THUNDERSTORMS:** 280 severe thunderstorm events have been recorded since 1950. These events resulted \$890,000 million in property damages. Future occurrences are highly likely.
- **HAILSTORM:** There have been 536 recorded events since 1950. Future occurrences are likely.
- **LIGHTNING:** Since 1996, there have been 79 reported occurrences, which resulted in 5 deaths, 16 injuries and nearly \$4.8 million dollars in property damage. Future occurrences are highly likely.
- **SINKHOLES:** There have been a number of reported sinkhole events in the region. Future occurrences are likely.
- **EARTHQUAKE:** No significant earthquake events have taken place in the region, but future occurrences are possible.
- **INFECTIOUS DISEASE:** Infectious disease is an unlikely hazard for the region.
- **HAZARDOUS MATERIALS INCIDENTS:** 136 serious HAZMAT events have been reported since 1970 through the PHMSA. There are 87 TRI Facilities in the region. Future occurrences are possible.

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- NUCLEAR EMERGENCY: There is 1 nuclear facility within 50 miles of the region. No major historical occurrences were found, and future occurrences are unlikely.
- TERRORISM: Although there are a number of potential targets for terrorist in the region, future occurrences are unlikely.
- CYBER: Cyber is an emerging hazard for the region. Future occurrences are possible.
- ELECTROMAGNETIC PULSE: EMP is a low- probability hazard for the region.

In concluding the review of Hazard Profiles, Mr. Slaughter stated if anyone had additional information for the hazard profiles. Planning committee members offered the following comments:

- Continue to include rip currents as a hazard in the plan even though it is not included in the plan.
- Separate sinkholes and coastal erosion into their own hazards and not combine them as geological hazards.

After the open discussion, Mr. Slaughter asked the planning committee members to call or email him with their concerns or additional comments on the risk assessment.

The results of the hazard identification process were used to generate a Priority Risk Index (PRI), which categorizes and prioritizes potential hazards as high, moderate or low risk based on probability, impact, spatial extent, warning time, and duration. The highest PRI was assigned to Flood, Hurricanes/Coastal Hazards, Cyber, Tornadoes/Thunderstorm. The committee reviewed most recent hazard profile data and discussed separating sinkholes and erosion into separate hazards. The committee also wished to add rip currents as a hazard to be evaluated.

Mr. Slaughter then displayed maps that presented each county's social vulnerability, as documented by the Center for Disease Control. The maps present how socially vulnerable areas in each county are as compared to the rest of North Carolina. Many indicators were used to determine the social vulnerability, and the factors were grouped into four themes that were based on census-tract levels.

After a brief break, Mr. Slaughter then presented the Capability Assessment Findings. ESP Associates used a scoring system that was used to rank the participating jurisdictions in terms of capability in four major areas (Planning and Regulatory; Administrative and Technical; Fiscal; Political). Important capability indicators include National Flood Insurance Program (NFIP) participation, Building Code Effective Grading Schedule (BCEGS) score, and Community Rating System (CRS) participation.

Mr. Slaughter reviewed the Relevant Plans and Ordinances, Relevant Staff/Personnel Resources, and Relevant Fiscal Resources. All of these categories were used to rate the overall capability of the participating counties and jurisdictions. He indicated that the best-case scenario for communities was to have high capability and low vulnerability. Conversely, the worst-case scenario for communities was to have high vulnerability and low capability. Most jurisdictions are in the moderate to high range for Planning and Regulatory Capability and in the low to moderate range for Fiscal Capability. There is variation between the jurisdictions for Administrative and Technical Capability, mainly with respect to availability of planners and grant writers. Based upon the scoring methodology, it was determined that all of the participating jurisdictions have moderate or high capabilities to implement hazard mitigation programs and activities.

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Members of the planning committee mentioned a joint land use study that was recently completed for some of the participating jurisdictions and the Army's Military Ocean Terminal Sunny Point (MOTSU). Mr. Slaughter indicated that he would review the study and incorporate it into the capability assessment as appropriate.

Mr. Slaughter then transitioned to the Mitigation Strategy portion of the presentation. He began by reviewing some of the major concepts of mitigation and then gave the results of the icebreaker exercise from the first Regional Hazard Mitigation Planning Committee meeting, where attendees were given "money" to spend on various hazard mitigation techniques. The results were as follows:

- Prevention \$232
- Structural Projects \$148
- Property Protection \$116
- Emergency Services \$80
- Natural Resource Protection \$62
- Public Education and Awareness \$42

Mr. Slaughter gave an overview of the process for updating the Mitigation Strategy and presented the existing mitigation goals for the regional plan. He asked the Regional Hazard Mitigation Planning Committee to review the goals to determine whether or not they still reflect current vulnerabilities and current mitigation priorities. The committee members agreed that the goals were still relevant and should remain the goals moving forward.

Mr. Slaughter then indicated that each participating jurisdiction would need to provide a status update for their existing mitigation actions (completed, deleted, or deferred) by March 21, 2019. Mr. Slaughter also discussed the Mitigation Action Worksheets to be completed for any new mitigation actions and requested that all worksheets be returned by March 21, 2019. Mr. Slaughter then presented sample mitigation actions for the committee members to consider to include in their plan update.

Mr. Slaughter then discussed the results of the public participation survey that was posted on several of the participating counties' and jurisdictions' websites. As of the meeting date, 790 responses had been received. Based on the preliminary results, respondents felt that hurricanes, and flooding posed the greatest threats to their neighborhood. Most did not live in a floodplain or have flood insurance, but 73.8% of all respondents did not know who to contact regarding reducing their risks to hazards.

Finally, Mr. Slaughter discussed the next steps in the planning process. These included returning mitigation action updates and delivery of a draft plan in May 2019. He thanked the group for taking the time to attend and the meeting was adjourned.

2.6 INVOLVING THE PUBLIC

44 CFR Requirement

44 CFR Part 201.6(b)(1): The planning process shall include an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval

An important component of the mitigation planning process involved public participation. Individual citizen and community-based input provides the entire planning team with a greater understanding of local concerns and increases the likelihood of successfully implementing mitigation actions by developing community “buy-in” from those directly affected by the decisions of public officials. As citizens become more involved in decisions that affect their safety, they are more likely to gain a greater appreciation of the hazards present in their community and take the steps necessary to reduce their impact. Public awareness is a key component of any community’s overall mitigation strategy aimed at making a home, neighborhood, school, business or entire city safer from the potential effects of hazards.

Public involvement in the development of the *Southeastern NC Regional Hazard Mitigation Plan* was sought using three methods: (1) physical public meetings; (2) public survey instruments were made available in hard copy and online; and (3) copies of the draft Plan deliverables were made available for public review on county and municipal websites and at government offices. The public was provided three opportunities to be involved in the development of the regional plan at distinct periods during the planning process: (1) during the drafting stage of the Plan; and (2) upon completion of a final draft Plan, but prior to official plan approval and adoption and (3) at the time of official plan adoption by the governing body of each participating jurisdiction. In addition, a public survey (discussed in greater detail in Section 2.6.1) was made available during the planning process at various locations throughout Brunswick, New Hanover, Onslow and Pender and on county and municipal websites. Documentation of these efforts is provided in Appendix D.

In addition to the opportunities for public comments previously discussed, each of the participating jurisdictions will hold public meetings before the final plan is officially adopted by the local governing bodies. These meetings will occur at different times once FEMA has granted conditional approval of the Plan. Adoption resolutions will be included in Appendix A.

Meeting Minutes from Public Meeting #1

October 22, 2019

New Hanover County Northeast Library

Nathan Slaughter, Department Manager from ESP Associates, Inc. and Project Manager for the update of the Southeastern NC Regional Hazard Mitigation Plan, began the meeting by giving a brief overview of the project and the purpose of the meeting.

He explained that the project is funded by a FEMA PDM grant and is conducted to comply with the Disaster Mitigation Act of 2000 and NC Senate Bill 300. He then discussed the region’s high, moderate, and low risk hazards that the Regional Hazard Mitigation Planning Team had elected.

Next, Mr. Slaughter defined mitigation and identified the six hazard mitigation planning techniques: prevention, property protection, natural resource protection, structural projects, emergency services,

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and public education and awareness. He followed by providing the list of all participating counties and their respective jurisdictions.

Mr. Slaughter then showed an example of the previous Mitigation Action Plan and asked the following questions:

- Where are trouble spots in your neighborhood?
- How can mitigation be improved in your community?
- Which mitigation techniques need improvement?

The meeting concluded after the attendees gave their personal opinions and filled out the public survey.

Meeting Minutes from Public Meeting #2

October 23, 2019

Oak Island City Council Chambers

Mr. Slaughter and Steve Edwards from the Town of Oak Island were present for this meeting; however, because no citizens or stakeholders attended this opportunity for public comment, the meeting was adjourned without a formal presentation given.

Meeting Minutes from Public Meeting #3

November 12, 2019

Onslow County Emergency Operations Center

Nathan Slaughter, Department Manager from ESP Associates, Inc. and Project Manager for the update of the Southeastern NC Regional Hazard Mitigation Plan, began the meeting by giving a brief overview of the project and the purpose of the meeting.

He explained that the project is funded by a FEMA PDM grant and is conducted to comply with the Disaster Mitigation Act of 2000 and NC Senate Bill 300. He then discussed the region's high, moderate, and low risk hazards that the Regional Hazard Mitigation Planning Team had elected.

Next, Mr. Slaughter identified the six hazard mitigation planning techniques: prevention, property protection, natural resource protection, structural projects, emergency services, and public education and awareness. He followed by providing the list of all participating counties and their respective jurisdictions.

Mr. Slaughter then showed an example of the previous Mitigation Action Plan and asked the following questions:

- Where are trouble spots in your neighborhood?
- How can mitigation be improved in your community?
- Which mitigation techniques need improvement?

The meeting concluded after the attendees gave their personal opinions and filled out the public survey.

The final opportunity for public input on the plan came at each participating jurisdictions' County or City Council meeting where the plan was presented for formal adoption. Each of those meetings are open to

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the public and therefore provided the public an opportunity to provide any final input or comments on the plan.

2.6.1 Public Participation Survey

The Regional Hazard Mitigation Committee was successful in getting citizens to provide input to the mitigation planning process through the use of the *Public Participation Survey*. The *Public Participation Survey* was designed to capture data and information from residents of the Southeastern NC Region that might not be able to attend public meetings or participate through other means in the mitigation planning process.

Copies of the *Public Participation Survey* were distributed to the Regional Hazard Mitigation Committee to be made available for residents to complete at local public offices. Additionally, a link to an electronic version of the survey was also posted on each county's and municipal websites. A total of 792 survey responses were received, which provided valuable input for the Regional Hazard Mitigation Committee to consider in the development of the plan update. Selected survey results are presented below.

- ◆ Approximately 93 percent of survey respondents had been impacted by a disaster, primarily hurricanes.
- ◆ Respondents ranked Hurricanes and Coastal Hazards as the highest threat to their neighborhood (69.8 percent), followed by Flooding (14.4 percent), and, Severe Thunderstorms/High Winds (5.2 percent).
- ◆ Approximately 65 percent of respondents have taken actions to make their homes more resistant to hazards and 88.4 percent are interested in making their homes more resistant to hazards.
- ◆ 73.7 percent of respondents do not know what office to contact regarding reducing their risks to hazards.
- ◆ Emergency Services and Prevention were ranked as the most important activities for communities to pursue in reducing risks.

More detailed results can be found in Appendix D of this plan.

2.7 INVOLVING THE STAKEHOLDERS

44 CFR Requirement

44 CFR Part 201.6(b)(2): The planning process shall include an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other non-profit interests to be involved in the planning process.

At the beginning of the planning process for the development of this plan, the project consultant worked with each of the four County Emergency Management leads to initiate outreach to stakeholders to be involved in the planning process. The project consultant distributed a list of recommended stakeholders provided from FEMA Publication 386-1 titled **Getting Started: Building**

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Support for Mitigation Planning, which demonstrated the wide range of stakeholders that were considered to participate in the development of this plan. Each of the County Emergency Management leads used that list for reference as they invited stakeholders from their counties to participate in the planning process.

In addition to participation from a wide variety of County-level departments, additional stakeholders that were involved in the process of developing this plan included a variety of non-governmental stakeholders as listed in Section 2.4.

The Regional Hazard Mitigation Committee encouraged more open and widespread participation in the mitigation planning process. The region also went above and beyond in its local outreach efforts through the design and distribution of the *Public Participation Survey*. This opportunity was provided for local officials, residents, businesses, academia, and other private interests in the Southeastern NC Region to be involved and offer input throughout the local mitigation planning process.

2.8 DOCUMENTATION OF PLAN PROGRESS

Progress in hazard mitigation planning for the participating jurisdictions in the Southeastern NC Region is documented in this plan update. Since hazard mitigation planning efforts officially began in the participating counties with the development of the initial Hazard Mitigation Plans in the late 1990s and early 2000s, many mitigation actions have been completed and implemented in the participating jurisdictions. These actions will help reduce the overall risk to natural hazards for the people and property in the Southeastern NC Region. The actions that have been completed are documented in Appendix E.

Further documentation of plan implementation progress can be found in the Capability Assessment. Community capability continues to improve for each participating jurisdiction with the implementation of new plans, policies and programs that help to promote hazard mitigation at the local level. The current state of local capabilities for the participating jurisdictions is captured in Section 7: *Capability Assessment*. The participating jurisdictions continue to demonstrate their commitment to hazard mitigation and hazard mitigation planning and have proven this by reconvening the Regional Hazard Mitigation Committee to update the Plan and by continuing to involve the public in the hazard mitigation planning process.

2.9 CRS COMMUNITY PLANNING PROCESS DOCUMENTATION

There are fourteen communities in the Southeastern NC Region that participate in the CRS. They are:

- Caswell Beach
- Holden Beach
- Oak Island
- Ocean Isle Beach
- Southport
- Sunset Beach
- New Hanover County
- Carolina Beach
- Kure Beach
- Wrightsville Beach
- Topsail Beach
- Onslow County
- Jacksonville
- North Topsail Beach

As a participant in the NFIP's CRS program, each of these communities took additional steps during the 2020 update of this plan to meet the CRS requirements of Activity 510: Floodplain Management

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Planning and attempt to maximize the number of points the communities received for this activity for this plan. Specific to the planning process, the communities ensured the following activities took place:

- Assigned County and City staff to serve on the Regional Hazard Mitigation Planning Committee. The staff members assigned to the committee actively participated in the plan update process and represent a wide range of staff expertise in the areas of mitigation techniques. The staff and their associated area of expertise are listed in Table 2.5.

TABLE 2.5: CRS COUNTY AND CITY STAFF MEMBERS OF THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLANNING TEAM AND THEIR AREA OF EXPERTISE

NAME	DEPARTMENT / AGENCY / TITLE	MITIGATION TECHNIQUE					
		PREVENTION MEASURES	PROPERTY PROTECTION	NATURAL RESOURCE PROTECTION	EMERGENCY SERVICES	STRUCTURAL PROJECTS	PUBLIC INFORMATION
Hicks, Chad	Town, Administrator, Caswell Beach	X	X	X	X	X	X
	Caswell Beach	X	X	X	X	X	X
Murphy, Miles	Planner, Carolina Beach	X	X	X	X	X	X
Abbotts, Gloria	Graduate Fellow, Carolina Beach	X	X	X	X	X	X
Evans, Timothy Dale	Planning and Inspections Director, Holden Beach	X	X	X	X	X	X
Wooten, Rhonda	CAMA/Zoning Official, Holden Beach	X	X	X	X	X	X
	Kure Beach	X	X	X	X	X	X
	Kure Beach	X	X	X	X	X	X
Edwards, Steve	Development Services Director, Oak Island	X	X	X	X	X	X
Kelly, David	Town Manager, Oak Island	X	X	X	X	X	X
Welsh, Trevor	Building Inspector, Wrightsville Beach	X	X	X	X	X	X
	Wrightsville Beach	X	X	X	X	X	X
Dycus, Keith	Development Services Specialist, Ocean Isle Beach	X	X	X	X	X	X
Whiteside, Justin	Assistant Town Manager, Ocean Isle Beach	X	X	X	X	X	X
	Topsail Beach	X	X	X	X	X	X

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NAME	DEPARTMENT / AGENCY / TITLE	MITIGATION TECHNIQUE					
		PREVENTION MEASURES	PROPERTY PROTECTION	NATURAL RESOURCE PROTECTION	EMERGENCY SERVICES	STRUCTURAL PROJECTS	PUBLIC INFORMATION
	Topsail Beach	X	X	X	X	X	X
Lloyd, Thomas	City Planner, Southport	X	X	X	X	X	X
	Southport	X	X	X	X	X	X
Miles, Stacie	Emergency Management Deputy Director, Onslow County	X	X	X	X	X	X
Rhue, Jessica	Planning Director, Onslow County	X	X	X	X	X	X
Rademacher, Todd	Planning Director, Sunset Beach	X	X	X	X	X	X
	Sunset Beach	X	X	X	X	X	X
Tallman, Tee	Fire Chief, Jacksonville	X	X	X	X	X	X
Massey, Ron	Deputy City Manager, Jacksonville	X	X	X	X	X	X
McRay, Anna	Emergency Management Deputy Director, New Hanover County	X	X	X	X	X	X
Vafier, Ken	Planning Manager, New Hanover County	X	X	X	X	X	X
Hill, Deb	Planning Director, North Topsail Beach	X	X	X	X	X	X
	North Topsail Beach	X	X	X	X	X	X

- A CRS Steering Committee was established and was comprised of 50% public sector and 50% private sector/citizen representation. This was done to meet the requirements of CRS Planning Step 2. The makeup of the steering committee is discussed in Section 2.4.
- Ensured that the first public meeting held during the plan update process was conducted within the first two months of the planning process. As previously documented, the first meeting in the plan update process (Regional Hazard Mitigation Planning Committee Kickoff Meeting) was held on September 18, 2019. The first public meeting was held in the evening of October 22, 2019, just over a month from the beginning of the plan update process.
- Invited multiple outside stakeholders to participate in the plan update process. An email was sent to the following stakeholders to invited them to attend the public meeting. The email invitation is included in Appendix D.

- Onslow County Schools

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- Cape Fear Community College
- WH
- NHRMC
- NHREMS
- NHREMS
- NHRMC EM
- **New Hanover Disaster Coalition**
- USCG
- USCG
- USCG
- CFPUA
- CFPUA
- **Southeastern Healthcare Preparedness Region**
- **Harrelson Center/HelpHub/NHDC**
- **GE-Hitachi Nuclear**
- **United Way CFA**
- **Onslow County Albert J Ellis Airport**
- **Coastal Carolina Community College**
- **Water Resources Private Consultant**
- **New Hanover Disaster Coalition**
- **State of NC – Fort Fisher**
- **UNCW**
- **American Red Cross**

Bold font indicates the organizations that attended the meeting and/or filled out public surveys.

- Ensured that the final public meeting at least two weeks before submittal of the final plan to County and City governing bodies for adoption.