

PASQUOTANK COUNTY

RESILIENCE STRATEGY

SEPTEMBER 25, 2026



PASQUOTANK
COUNTY



Acknowledgements

This project was implemented through the North Carolina Resilient Coastal Communities Program (RCCP), administered by the North Carolina Department of Environmental Quality (DEQ), Division of Coastal Management (DCM), with funding from the National Fish and Wildlife Foundation (NFWF). This project would not be possible without the contributions of many dedicated individuals committed to a more resilient future for Pasquotank County. The time, input, and expertise of the following people were integral to the development of an implementable Resilient Strategy.

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Executive Summary

Pasquotank County developed this Resilience Strategy through the North Carolina Resilient Coastal Communities Program (RCCP) to better understand local flood and climate risks, identify priority resilience needs, and establish a practical path toward implementation. The strategy builds on prior planning efforts, including the Newland Township Resiliency Strategy, and expands the focus to the countywide scale.

The planning process was guided by input from the Community Action Team (CAT), public engagement activities, existing plan review, and a countywide risk and vulnerability assessment. Together, these efforts identified flooding, stormwater drainage, saltwater intrusion, roadway access, agricultural vulnerability, and protection of natural resources as central resilience concerns. The assessment evaluated critical assets, infrastructure, and natural systems to determine where exposure, sensitivity, and limited adaptive capacity may create the greatest challenges during future hazard events.

The resulting Project Portfolio translates these findings into phased, implementable actions organized around flood risk assessment, stormwater and drainage improvements, nature-based solutions, natural resource protection, thoughtful growth, and community capacity. These actions are intended to help the County improve drainage and transportation reliability, protect wetlands and waterways, support agricultural resilience, guide future development decisions, and pursue funding for priority projects.

By documenting local risks, community priorities, and actionable implementation pathways, the Resilience Strategy provides Pasquotank County with a roadmap for advancing resilience. Continued coordination among County departments, state and regional partners, residents, and the CAT will be essential to moving priority actions from planning into design, funding, and implementation.



Photo 1. Fun Junktion Park, Weston & Sampson

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1. Introduction

Overview

The North Carolina Resilient Coastal Communities Program (RCCP) is a state-local partnership designed to help overcome barriers in coastal resilience and adaptation planning, boost local government capacity, and support a proactive, sustainable, and equitable approach to coastal resilience planning and project implementation. The RCCP is managed by the Division of Coastal Management and receives funding from the North Carolina General Assembly and National Fish and Wildlife Foundation Coastal Resilience Fund. All counties and municipalities within the CAMA jurisdiction, those subject to the Coastal Area Management Act, are eligible to apply for the RCCP.

There are four phases of the NC RCCP:

Phase 1: Community Engagement & Risk/Vulnerability Assessment

Phase 2: Planning, Project Identification, & Prioritization

Phase 3: Engineering & Design

Phase 4: Project Implementation

Phase 1 and 2

This report includes the components required for Phases 1 and 2 of this program for Pasquotank County. The objective of these two phases is to perform a risk and vulnerability assessment and develop a portfolio of solutions to address climate and flood vulnerability. Once communities complete Phases 1 and 2 for RCCP they are eligible to apply for additional funding via Phase 3 and Phase 4.

Pasquotank County is committed to making the county more resilient to storm and flood events to better protect critical and natural infrastructure, facilities, and public amenities. In addition, the County would like to help residents and property owners better prepare for such events. Therefore, the County pursued funding to participate in the RCCP to develop a more resilient future that addresses increasing flood risks along the Pasquotank River and its tributaries, supports the long-term viability of the County's agricultural economy and strengthens the capacity of communities, infrastructure, and natural systems to withstand and recover from climate-related impacts. The planning effort focuses on reducing flood vulnerability, improving water management, protecting working lands, and enhancing resilience for residents throughout the county.

Utilizing this funding, the County originally concentrated its efforts on Newland Township through the 2024 Newland Township Resiliency Strategy. The scope of this work has since been broadened within this strategy to include the entire county.

About the RCCP Planning Handbook



The RCCP is a step-wise process with a prescriptive handbook. The purpose of the handbook is to guide contractors and local governments in completing Phases 1 and 2 of the RCCP. Within the handbook are existing data, tools, and resources.

Community Description

Pasquotank County is located in the Albemarle region. The county has a total area of 226.9 square miles of land area.¹ A distinctive part of this region is the Albemarle Sound, a large estuary at the confluence of the Chowan, Roanoke, Alligator, Pasquotank, Perquimans, and Little Rivers. Pasquotank County contains six townships including Elizabeth City, Newland, Providence, Mount Hermon, Nixonton, and Salem.

This Resilience Strategy focuses on the County's townships and does not include the jurisdictional limits of Elizabeth City. Elizabeth City independently developed its own Resiliency Strategy in 2024 and has since begun implementing the actions identified within that plan. However, several major regional assets located within the city, including Albemarle Regional Medical Center, College of The Albemarle (COA), and Elizabeth City State University (ECSU), are closely connected to the County's resilience. The continued functionality of these institutions depends on resilient transportation networks, utility systems, and emergency access routes that extend beyond jurisdictional boundaries. As a result, ongoing coordination between Pasquotank County and Elizabeth City will be important to align resilience strategies, investments, and implementation efforts.

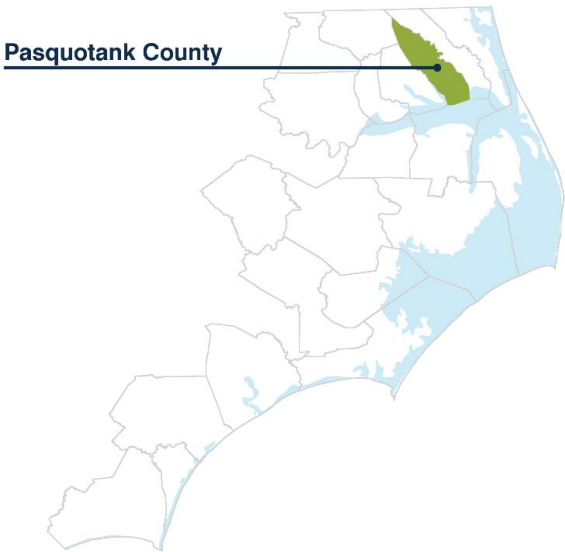


Figure 1. Pasquotank County is one of 20 counties included under CAMA.

One of the most prominent land features in the County is the Great Dismal Swamp National Wildlife Refuge, one of the largest intact remnants of vast freshwater swamp that stretches across both Virginia and North Carolina. Additionally, much of the County borders the Albemarle Sound, with the Little River along the western side of the County and Pasquotank River along the eastern side of the County, providing wildlife habitat and recreational access.

As of 2025 American Community Survey, Pasquotank County had a population count of 42,201.² The County's population is growing, with a population percent change of 4.0% from 2020 to 2025 estimates.³ The County has faced development pressures from housing development, especially in waterfront areas, agricultural lands and near transportation corridors. Much of these development pressures are due to the County's geographic location on the East Coast. Pasquotank County is roughly 50 miles to Virginia Beach, Virginia and 35 – 60 miles to the Outer Banks, North Carolina. The County contains two major corridors, the Route 158 and Route 17.

Due to the County's low-lying elevation and proximity to water, flooding is a common occurrence within the County. Much of the perimeter and areas adjacent to waterways such as streams and rivers experience flooding due to storm surge, heavy precipitation events, sea level rise, tidal fluxes, and riverine surges, placing both homes and farmlands at significant risk. Saltwater intrusion of agricultural fields and failure of septic tanks are of concern in the County. Residents have expressed that roadway drainage and drainage ditch overflow are two major problems that contribute to flooding in the area.

¹ U.S. Census Bureau. (n.d.) Pasquotank County, North Carolina. https://data.census.gov/profile/Pasquotank_County,_North_Carolina?g=050XX00US37139#populations-and-people
² U.S. Census Bureau. (2025) 2025: ACS 5-Year Estimates Data Profiles: ACS Demographic and Housing Estimates. <https://data.census.gov>.
³ U.S. Census Bureau. (n.d.) QuickFacts Pasquotank County, North Carolina. <https://www.census.gov/quickfacts/fact/table/pasquotankcountynorthcarolina/PST045224>.



Photo 2. Great Dismal Swamp, Weston & Sampson

2. Community Action Team (CAT)

Selecting and working with the Community Action Team (CAT) is a key component of the RCCP. The CAT is a multi-disciplinary committee that contains members of the community with expertise and knowledge of the county. This committee met several times throughout the planning process to help guide the development of the Pasquotank County Resiliency Strategy. Specifically, the CAT assisted the County in engaging community members, provided input on the risk and vulnerability assessment including which critical assets were included, identified strategies and actions, and reviewed deliverables. Alongside dedicated CAT meetings, the CAT was also invited to the public-facing risk and vulnerability assessment virtual workshop and in-person action development workshop.

Overview of CAT Members

County staff recommended the initial roster of CAT members. The composition of the Pasquotank County CAT includes several residents who are a part of Green Saves Green, a nonpartisan, all-volunteer, homegrown organization dedicated to protecting the local environment. The CAT Champion, Brian Parnell, is the Emergency Management Director for the Albemarle Region. Director Parnell served on both the CAT for Newland Township as well as Elizabeth City. He has provided distinct knowledge of the emergency response protocols, programs, and projects in the region. This list of members and their affiliation is provided in Table 1 below.

Table 1. CAT Members for the Pasquotank County Resiliency Strategy

Name	Affiliation	Knowledge Areas
Nita Coleman	Green Saves Green	Environmental Action; Conservation
Kevin Kupietz	Elizabeth State University	Education; Research
Dwane Hinson	Pasquotank County Drainage Committee	Stormwater Management; Drainage
Charles Jordan	Pasquotank County Drainage Committee	Stormwater Management; Drainage
Rodney Johnson	Pasquotank County Drainage Committee	Stormwater Management; Drainage
Maurice Berry	Pasquotank County Drainage Committee	Stormwater Management; Drainage
Kevin Brickhouse	Pasquotank County Drainage Committee	Stormwater Management; Drainage
Holly White	North Carolina Department of Environmental Quality	Resilience Planning; Nature-Based Solutions
Brian Parnell*	Emergency Management Director	Emergency Management
Bill Kruse	Pasquotank County Planning Board	Comprehensive Planning; Water Resources Management Planning
Steve Harris	Pasquotank County Drainage Committee	Stormwater Management; Drainage

**Indicates member may also serve as a CAT Champion.*

3. Vision and Goals

An important first step in the resiliency planning process is developing a unified vision supported by clear, actionable goals. The RCCP requires a community-specific vision and set of goals that reflect local priorities and long-term resilience outcomes.

 **Vision Statements** : “The vision is an aspirational statement for where the community wants to be in the future (e.g., in the next 10 or more years), particularly in relation to coastal hazards” (RCCP Planning Handbook).

 **Goal Statements** : “Specific, measurable goals will help the community identify steps that can be taken to achieve the vision. Resilience goals can relate to preparedness, recovery, community engagement, construction, restoration, etc” (RCCP Planning Handbook).

Together, the vision and goals establish a cohesive framework that directs the Pasquotank County Resilience Strategy over the next ten years and beyond.

Review of Existing Vision and Goal Statements

Alongside reviewing existing plans and efforts for previous resilience action development and vulnerability assessment, vision and goal statements from these documents were also examined. This process includes drawing from previously identified goals or vision statements developed through other planning or budget processes, past natural hazard events or trends, and community demographics, including particularly vulnerable populations.

The Pasquotank County Resiliency Strategy referenced the County's existing plans and efforts. Since many of the documents reviewed included vision or goal statement(s), these were used to develop the new vision statement and set of goals developed for the Pasquotank County Resiliency Strategy. Pasquotank County performed a resiliency visioning exercise for the Newland Township Resiliency Strategy that is especially useful in this circumstance.

Vision and goal statements from existing plans and efforts reviewed provide insight into the strengths and challenges the County has faced in the past and may currently still be facing. Table 2 provides a list of vision and goal topics that came up frequently and the documents these topics came from respectively. Frequent themes within the vision and goal topics included environmental concerns, economic development needs, agricultural preservation, resilient infrastructure, and a desire to support vulnerable populations.

Table 2. Existing Plans and Efforts Review Vision and Goal Topics

Vision / Goal Topic	Plan Mentioning Vision / Goal Topic
Environmental Conservation & Natural Resource Protection	• Pasquotank County Land Use Plan - CAMA • Newland Township Resiliency Strategy • Parks and Recreation Comprehensive Master Plan 2016-2026 • Pasquotank River Basin Water Resources Plan • Albemarle Regional HMP
Economic Development & Tourism	• Pasquotank County Land Use Plan - CAMA • Newland Township Resiliency Strategy • Tourism Development Authority Strategic Plan • Pasquotank County Comprehensive Transportation Plan
Rural Character Protection & Agricultural Resource Preservation	• Pasquotank County Land Use Plan - CAMA • Newland Township Resiliency Strategy
Resilient Infrastructure & Recovery Capacity	• Pasquotank County Land Use Plan - CAMA • Newland Township Resiliency Strategy • Albemarle Regional HMP • NC Climate Risk Assessment and Resilience Plan
Support and Outreach for Vulnerable Populations	• Pasquotank County Land Use Plan - CAMA • Newland Township Resiliency Strategy • Albemarle Regional HMP

Challenges, Strengths, and Goals for Pasquotank County

As a part of the kickoff meeting for the CAT, a virtual engagement exercise was conducted which reviewed the challenges, strengths, and goals in Pasquotank County. At the end of this exercise participants were asked to craft their own vision statements. The findings from this exercise, as well as, comments from public engagement are incorporated into the following sections.

Challenges

Pasquotank County faces a range of interconnected challenges shaped by its rural character, low-lying geography, aging infrastructure, and sensitive natural environment. Feedback from the CAT highlighted recurring issues such as flooding, storm damage, infrastructure degradation, agricultural vulnerabilities, and growing pressures on environmentally sensitive areas. Additionally, concerns about water quality, septic system failures, and limited local capacity further complicate the County's ability to manage hazards and prepare for future climate impacts. The key themes below summarize the primary resilience challenges identified by community members and stakeholders.



Flooding Vulnerabilities

Many members mentioned flooding-related issues due to the low-lying elevation of the county and susceptibility to storm events and sea level rise. Another threat was noted to be beaver dams and a lack of flow management devices. Inadequate maintenance and recovery efforts also contribute to flooding issues as many streams and drainageways remain blocked after storm events. Flooding has led to issues with accessibility as when streets flood, they become impassable for emergency vehicles and difficult for residents to evacuate.



Agricultural Encroachment

Another challenge the county faces is the vulnerability of its agricultural lands, as it is an important contributor to the local economy and livelihood of many residents. One member noted that much of the agricultural land and open space is being lost due to development, posing a threat to local character of the county and creating additional flood risk due to the addition of more impervious area. Additionally, saltwater intrusion, caused by the movement of saline water infiltrating freshwater aquifers, flooding, and droughts have all contributed to a loss in crop yields and failure for agricultural farms in the area.



Pressures on Environmentally Sensitive Areas

The County also contains conservation areas and environmentally sensitive areas that are vulnerable to economic pressures and hazard-related events. The County has experienced development pressure for additional housing in the area, especially along rivers and coastal waterfronts. With these new developments, there is concern regarding encroachment into wetlands and flood prone areas. Additionally, septic usage within the county poses a concern to environmental degradation and water quality. Another risk associated with septic usage is the reliance users have on these systems as when they fail or become compromised during flooding or extreme weather, users can quickly lose access to safe wastewater treatment, creating both public health concerns and costly recovery needs.

Strengths

Pasquotank County benefits from a wide range of strengths that support its resilience, quality of life, and agricultural heritage. CAT members highlighted strong civic engagement, valuable economic and geographic advantages, and an abundance of natural and built assets that contribute to the county's identity and capacity to adapt to future challenges. The key themes below summarize the strengths related to community involvement, employment and economic opportunities, and the County's natural and built infrastructure.



Involved Organizations and Community

An identified strength of Pasquotank County is the residents and numerous service and nonprofit organizations. This includes faith-based organizations, educational institutions, and Green Saves Green. One member noted that there is a lot of community engagement in conservation and environmental protection projects for the County. There are also great cultural resources within the community and a strong arts presence.



Employment and Geographic Opportunities

Pasquotank County is home to many local businesses and has a strong agricultural economy. It was noted by the CAT that alongside agriculture, it is a regional hub for commerce and the Coast Guard provides many jobs. Additionally, it was noted that the current staffing of public safety and ratio to the population is another strength. Additionally, the county's geographic location plays an important role in its local economy. Its proximity to major coastal destinations such as the Outer Banks and the Hampton Roads region creates economic opportunities through tourism traffic, regional workforce connections, and access to larger commercial markets.



Natural Resources and Built Infrastructure

Built and natural infrastructure are among the strengths of the county. Many members of the CAT noted that the natural environment and abundance of open spaces were strengths for Pasquotank County to conserve and protect. Additionally, built infrastructure such as the water utility system were noted by a member to be a strength. Proactive planning and drainage planning were also noted.

Goals

The CAT identified several priority areas essential to strengthening Pasquotank County's long-term resilience and overall quality of life. Their input emphasized the need to deepen public engagement, develop clear and actionable implementation strategies, protect working lands and natural resources, and modernize infrastructure to prepare for current and future flooding risks. The following sections summarize these key themes and outline the community's shared vision for building a more resilient, sustainable, and connected county.



Stronger Public Engagement in Resilience

The CAT emphasized the need for stronger public engagement and greater community involvement in understanding local resilience challenges. Several members highlighted the importance of expanding public water access and recreational opportunities to foster deeper connections between residents and the natural environment. By improving access to rivers, trails, and natural areas, the community can build greater awareness of environmental conditions and support for conservation efforts. Additionally, one member recommended integrating educational signage and similar tools to help inform the public about local challenges and the strategies being used to address them.



Definable and Actionable Strategies

The CAT expressed a clear desire for this project to outline a structured implementation framework that includes short-, medium-, and long-term strategies. Members emphasized that breaking actions into phased timelines would help the County prioritize efforts, coordinate resources, and track progress over time. In addition, there was strong interest in explicitly identifying potential funding sources or mechanisms within the implementation section. Providing this information would help the County pursue grants, allocate local resources effectively, and better understand the feasibility of each recommended strategy.



Protect Agricultural Lands and Natural Resources

Many CAT members emphasized the importance of preserving the County's most productive farmland and expanding the use of nature-based solutions. Protecting agricultural areas and ecologically sensitive communities, such as wetlands, floodplains, and wildlife habitats, requires not only conservation, regulation, and land stewardship, but also the integration of nature-based strategies, such as shoreline stabilization in waterfront parks, to reduce erosion and enhance ecosystem health. Together, these efforts help safeguard natural resources, support long-term agricultural viability, and strengthen the County's overall climate and environmental resilience.



Build Flood-Resilient and Reliable Infrastructure

Many CAT members discussed bringing transportation and drainage systems up to date for current flooding and prepared for future flood risks. Goals developed around this topic included maintaining updated flood modeling (including Knobbs Creek), using watershed-based drainage solutions, planning for future conditions such as sea level rise and increased rainfall, and bringing all public roads up to NCDOT standards for long-term reliability and safety.

Vision Statements

The CAT and community were asked to craft vision statements during the kickoff meeting held on January 14, 2026. Additionally, the residents who completed the online survey were given the chance to respond and craft their own. From these touchpoints, similar themes as discussed in the CAT engagement and existing plan review came up. These topics are related heavily to supporting natural resource conservation, supporting agricultural economies, and maintaining resilient infrastructure.

Vision statements received from the CAT or public included the following:

- We envision Pasquotank County to remain rural and water quality remains good in our rivers and creeks. Agriculture can withstand sea level rise better than development/houses.
- Pasquotank County is a rural community that is also a hub of activity in the northeast. Pasquotank is rich in history and cultural opportunities and abundant in natural resources. We envision Pasquotank County as a place that preserves and values its cultural and natural resource assets that draw people to the region and make it a great place to live while balancing economic growth. To reduce the impact of climate hazards, the County will integrate future conditions in planning and projects.
- We cherish, protect and enjoy the wetlands and waterways that surround us.
- The County should offer a variety of economic opportunities while balancing growth pressures and preserving our natural environment.

Final Vision and Goal Statements

Based on CAT input, community engagement, and the review of existing conditions, this section presents the final vision statement and corresponding goals for the plan. These elements will directly inform and connect to the actions outlined later in the document.

Vision Statement



Pasquotank County will be a thriving community with diverse and robust economic opportunities while balancing growth pressures and preserving the wetlands, waterways, and natural environment that we cherish and depend on.

Goals

- 1 Increase community awareness and participation in resilience efforts.**
- 2 Establish a clear, phased, and actional approach for strategies.**
- 3 Protect agricultural lands and natural resources.**
- 4 Enhance flood-resilient infrastructure.**
- 5 Promote responsible and resilient growth.**

Long-Term Investment in Community Resilience Planning

The vision and goals provide a framework for guiding future resilience planning, investment, and decision-making in Pasquotank County. The actions presented in this Strategy are organized around these goals and are intended to help the County reduce risk, protect natural resources, strengthen infrastructure, and manage growth in a way that supports long-term community resilience.

The adopted Resilience Strategy and vulnerability assessment findings should also inform future County decision-making, including review of rezonings, special use permits, major subdivisions, and other significant development proposals. Incorporating these findings early in the development review process can help the County evaluate flood exposure, drainage constraints, natural resource impacts, infrastructure capacity, and long-term resilience considerations before growth decisions are finalized.



Photo 3. Frog Island Marina, Weston & Sampson

4. Review of Existing Efforts

The RCCP requires reviewing existing plans and efforts to better understand ongoing and past planning efforts within the state and county that could shape the resiliency strategy. The intent of this exercise is to document critical assets for vulnerability assessment, review past hazard assessments to understand initial hazards of concern, and document relevant actions related to climate resilience. Table 3 includes a brief description of each plan or report that was reviewed.

Table 3. Summary of Existing Plans and Efforts Assessed

Scale	Year	Title	Summary
STATE	2020	NC Climate Risk Assessment and Resilience Plan	The plan presents a comprehensive framework for the state of North Carolina to assess its vulnerability to climate-change impacts across 11 major sectors (from water and infrastructure to public health and agriculture) and sets forth actionable strategies, especially emphasizing nature-based solutions and equity considerations, to enhance resilience and reduce risks.
	2021	South Atlantic Coastal Study (SACS) North Carolina Appendix	This report provides an assessment of coastal storms and sea-level rise risks and strategies to decrease risk to communities in North Carolina. The risk assessment focuses on flooding and erosion,

			while considering populations, environmental resources, and cultural resources affected.
	2021	NC Flood Damage Prevention Ordinance (Coastal & Non-Coastal)	The North Carolina Model Flood Damage Prevention Ordinance establishes minimum standards for local governments to manage development in flood-prone areas, aligning with the National Flood Insurance Program (NFIP) requirements. Its purpose is to protect public health and safety by reducing flood risks through measures such as permitting, elevation requirements, and restrictions on hazardous uses in floodplains.
REGIONAL	2022	Albemarle Regional Resilience Portfolio	Developed in partnership between North Carolina Office of Recovery and Resiliency (NCORR) and North Carolina Rural Center, The RISE Albemarle Regional Resilience Portfolio Program offers coaching and technical support to regional partners across eastern North Carolina to develop multi-county vulnerability assessments, identify priority actions to reduce risk and strengthen resilience, and create strategies for implementation.
	2022	Climate Change and Natural Hazards Vulnerability Assessment for the Albemarle Region	Developed in partnership between North Carolina Office of Recovery and Resiliency (NCORR) and North Carolina Rural Center, the natural hazards vulnerability assessment report was completed as a deliverable of the RISE Albemarle Regional Resilience Portfolio Program (detailed above).
	2025	Albemarle Regional HMP	This plan, developed collaboratively by the Albemarle Region Hazard Mitigation Planning Committee, outlines strategies to reduce disaster risk and helps all participating jurisdictions remain eligible for federal disaster assistance programs. It details a risk assessment and profiled hazards that pose a risk to each planning area, the assessed vulnerability to these hazards, and aimed capabilities in place to mitigate them.
	2021	Pasquotank River Basin Water Resources Plan	This basin plan provides a comprehensive assessment of the Pasquotank River Basin's water resources, identifying habitat and water-quality conditions, monitoring gaps, and future risks (such as sea level rise and flooding) and recommends priority actions to preserve, protect and restore aquatic systems while supporting sustainable water use.
COUNTY	2011	Code of Ordinances (& Chapter 152 - Flood Damage Prevention)	Pasquotank County's Code of Ordinances sets comprehensive rules for land use, building standards, and environmental protection, including zoning districts and development requirements. Chapter 152 specifically addresses flood damage prevention and establishes standards to minimize flood risks in Special Flood Hazard Areas.
	1989	Subdivision Ordinance	The Subdivision Ordinance establishes rules for plat approval and infrastructure requirements. It ensures adequate drainage, stormwater control, and avoidance of flood hazards through design standards, compliance with floodplain maps, and coordination with public utilities and environmental constraints.
	2024	Pasquotank County Stormwater Design Manual	The stormwater design manual provides guidance to design professionals in the development of residential, commercial, and industrial projects in the County. It requires stormwater management plans, proper grading, and design of Best Management Practices (BMPs) like detention basins and culverts to reduce flooding and erosion.

	2023	Pasquotank County Land Use Plan - Coastal Area Management Act	The land use plan guides the growth, development, and natural resources conservation for the county. Through public engagement, a shared community vision and eleven key goals were identified. The top priorities noted in a public survey involve flooding, drainage, and stormwater. The plan provides recent demographic, economic, housing, and development information. The natural systems chapter highlights several Natural Systems Areas of Environmental Concern (AECs), water quality, existing land use, natural hazards, and community facilities. The future land use chapter highlights character, focal/enhancement, and natural hazard areas.
	2009	Pasquotank County, North Carolina Stormwater Design Manual	The storm water drainage manual provides guidance to design professionals in the development of residential, commercial, and industrial projects in the county. The contents of this manual include management plan and drainage study requirements, best management practice design criteria, floodplain and floodway management, stormwater management permitting, lot grading, and maintenance of stormwater improvements, and appendixes with relevant procedures, checklists, and floodplain maps.
	2024	Newland Township Resiliency Strategy	This report is developed through the North Carolina Resilient Coastal Communities Program (RCCP), a state-local partnership that helps coastal communities assess risks, plan projects, and build capacity for sustainable and equitable resilience to flooding and climate impacts. This report covers Phases 1 and 2 of the RCCP, focusing on community engagement, a vulnerability assessment, and identifying solutions to protect critical infrastructure, natural resources, and residents, addressing challenges such as storm surge, riverine flooding, sea level rise, and drainage issues.
	2017	Hurricane Matthew Redevelopment Plan	Following the widespread destruction caused by Hurricane Matthew in 2016, the North Carolina Resilient Redevelopment Planning (NCRRP) initiative was established to help communities develop locally driven recovery plans. This plan and program empowered communities to identify redevelopment strategies, innovative reconstruction projects, and other necessary actions to guide recovery. This document captures the County's current needs related to recovery and redevelopment.
CITY - COUNTY	2016	Pasquotank County Comprehensive Transportation Plan	This plan identifies current and future transportation needs across Pasquotank County and Elizabeth City, evaluating roadway conditions, crash patterns, traffic capacity, and connectivity gaps. It recommends improvements to roadways, bicycle and pedestrian facilities, and transit access to support safer travel and accommodate future growth.
	2016	Parks and Recreation Comprehensive Master Plan 2016-2026	The 2016–2026 Parks and Recreation Master Plan outlines a joint city-county strategy to improve park access, restore natural corridors, and integrate green infrastructure into recreation design. It positions parks and open space as key tools for flood resilience, tourism, and community health.
	2023	Tourism Development Authority Strategic Plan	The Strategic Plan sets a clear three-year roadmap for Elizabeth City and Pasquotank County to strengthen tourism through community storytelling, destination development, DEI initiatives, and collaborative branding. It positions Visit Elizabeth City as both an economic driver and a catalyst for community healing and pride.

Crosswalk of Existing Plans and Efforts

From the existing plans and efforts listed in the above section, a crosswalk detailing the contents of the plans is detailed in Table 4. The crosswalk of existing plans and efforts is a comparative analysis of comprehensive plans, resilience plans, and other resilience-related documents related to Pasquotank County. The crosswalk evaluates how well each plan addresses criteria that were drawn from the RCCP resilience strategy, providing alignment with Division of Coastal Management (DCM) expectations for flood resilience planning.

The crosswalk reviews documents ranging from city-county, county, regional, and state in scale. The criteria relate to plan information, background context, vulnerability assessment, and resilience actions. The plans were evaluated to determine whether they included information on the following:

- **Critical Assets** – The plan identified or located critical assets within the county that can be utilized in the asset inventory component of the vulnerability assessment. Additionally, this section documents whether the plan identifies areas for protection, such as floodplains, wetlands, or historically vulnerable neighborhoods.
- **Hazard Information** – The plan identified or located hazards (past and present) affecting the area or addressed climate change and future impacts.
- **Resilience Projects** – The plan includes proposed projects designed to enhance resilience and outlines supporting policies or strategies, such as zoning changes, green infrastructure implementation, or emergency preparedness initiatives.
- **Resiliency Strategies** – The plan assessed how the county has addressed resilience to date, including specific actions and measures already implemented to reduce the impacts of flooding and climate change.
- **Vision / Goals** – The plan includes a vision or goal statement, which reflects the community’s aspirations and priorities regarding resilience. It also captures community and demographic information to assess whether the plan acknowledges population-specific needs and vulnerabilities.

The crosswalk uses a coded system to indicate how thoroughly each element is addressed: an “X” means the plan satisfies the requirement. This visual system helps quickly identify gaps and strengths across the various planning documents.

Table 4. Crosswalk of Existing Plans and Efforts

Document	Critical Assets	Hazard Information	Resilience Projects	Resilience Strategies	Vision / Goals
NC Climate Risk Assessment and Resilience Plan	X	X	X	X	X
South Atlantic Coastal Study (SACS) NC Appendix		X	X	X	
NC Flood Damage Prevention Ordinance					
Albemarle Regional Resilience Portfolio		X	X	X	
Albemarle Regional Vulnerability Assessment	X	X			

Albemarle Regional Hazard Mitigation Plan	X	X	X	X	X
Pasquotank River Basin Water Resources Plan	X	X	X	X	X
Code of Ordinances (& Chapter 152)				X	
Subdivision Ordinance					
Pasquotank County Stormwater Design Manual		X		X	
Pasquotank County Land Use Plan - CAMA	X	X	X		X
Pasquotank County, NC Stormwater Design Manual		X			
Newland Township Resiliency Strategy	X	X	X	X	X
Hurricane Matthew Redevelopment Plan		X	X		
Pasquotank County Comp Transportation Plan	X		X		X
Parks and Recreation Comprehensive Master Plan	X		X		X
Tourism Development Authority Strategic Plan	X				X

Strengths and Gaps

At the state level, the North Carolina Climate Risk Assessment and Resilience Plan provides a detailed, science-based framework for understanding and addressing climate vulnerabilities across key sectors such as infrastructure, public health, agriculture, and natural resources. The plan emphasizes the importance of incorporating nature-based solutions, including wetland restoration, riparian buffers, and living shorelines, and emphasizing equity in decision-making to reduce risks and improve long-term community resilience. State agencies, including the N.C. Office of Recovery & Resiliency (NCORR), the N.C. Rural Center, and the N.C. Department of Environmental Quality (DEQ), have been instrumental in advancing this agenda by funding and supporting local and regional initiatives that promote adaptation, sustainable redevelopment, and hazard mitigation. Following the devastation of Hurricane Matthew in 2016, the North Carolina Resilient Redevelopment Planning (NCRRP) initiative was launched to help communities such as Pasquotank County identify localized recovery needs, develop redevelopment strategies, and design innovative projects aimed at rebuilding stronger and smarter. This effort not only supported immediate recovery but also laid the groundwork for ongoing resiliency planning by documenting local vulnerabilities and infrastructure priorities.

Building on these statewide efforts, regional programs have further advanced resilience in northeastern North Carolina. The RISE Albemarle Regional Resilience Portfolio Program, a collaboration between NCORR and the

N.C. Rural Center, provides coaching and technical assistance to help counties conduct multi-county vulnerability assessments, identify priority projects, and develop actionable strategies for implementation. Similarly, the RCCP, administered by NC Division of Coastal Management (DCM), supports local governments, including Pasquotank County, in assessing vulnerabilities, engaging residents, and identifying nature-based and structural projects to address both current and future climate hazards.

At the local level, Pasquotank County has embedded resilience principles into multiple planning and regulatory frameworks. The County policies emphasize flood risk reduction through enhanced drainage standards, the use of Best Management Practices (BMPs), and proactive floodplain management. The Pasquotank County Land Use Plan explicitly considers future sea-level rise and stormwater management in guiding development, while complementary plans such as the Pasquotank County-Elizabeth City Parks and Recreation Master Plan and Pasquotank County Transportation Plan integrate green infrastructure, mobility improvements, and access to recreation as strategies for flood mitigation and public well-being. The County has also completed a Resiliency Strategy for Newland Township, a particularly flood-prone area, which will serve as a model for community-scale adaptation planning for the County scale resilience strategy. Together, these plans and efforts demonstrate a multi-scalar and coordinated approach, linking state leadership, regional collaboration, and local implementation, to strengthen resilience across Pasquotank County and the broader Albemarle region.



Photo 4. Pasquotank County Convenience Center, Weston & Sampson

5. Community Engagement Strategy

Engagement with community members, including residents and stakeholders, is an integral element of the RCCP planning process. The Planning Handbook recommends developing an engagement plan that considers a variety of stakeholders and methods to gather meaningful feedback successfully and inclusively. The engagement strategy is documented within this section of the strategy. Additionally, the RCCP emphasizes elevating the voices of historically underrepresented communities, environmental justice populations, and socially vulnerable residents.

Public Engagement Methods

Four engagement styles were implemented throughout the planning process to maximize accessibility and participation:

- **Engagement Survey** – Distributed to gather input from residents across the county, allowing participants to share experiences, concerns, and resilience actions at their convenience. This format provided broad, flexible participation and helped capture geographically diverse feedback.
Hosted on Microsoft Forms from February to May 2026.
- **Pop-Up Event** – Designed to meet residents where they already gather, this engagement took place during a regularly scheduled community meeting.
Held on March 9, 2026, at the Green Saves Green monthly meeting.
- **Virtual Meeting** – Conducted during evening hours to accommodate residents' work schedules, this format allowed participants to join remotely and listen to the presentation.
Held on March 19, 2026 through Microsoft Teams.
- **Open House** – A drop-in style event that provided residents the opportunity to interact directly with the project management team and stay for as long as they wished.
Held on April 15, 2026 at the Pasquotank County Library.

Pop-Up Event

The pop-up event aimed to gather preliminary input on the status of resiliency in the County and promote future workshops. One of these workshops was hosted online and reviewed the findings from the vulnerability assessment. Another workshop was held in-person at the Pasquotank County Library and focused on action development. Figure 2 and Photo 3 illustrate the tabling materials used during public engagement even held at Green Saves Green, which asked participants three key questions: (1) What worries you most about flooding, storms, or sea level rise in Pasquotank County? (2) What is working well in Pasquotank County's approach to preparing for and recovering from storms and other hazards? and (3) What would you like the County to do to improve its ability to prepare for, respond to, and recover from hazard events? The brochure and text at the top of the board provided further information about the RCCP and the components of the Resiliency Strategy.

North Carolina Resilient Coastal Communities Program (RCCP)

The County received funding through the North Carolina Resilient Coastal Communities Program to create a resilience strategy. The RCCP is a state-local partnership administered by the North Carolina Division of Coastal Management designed to help overcome barriers in coastal resilience and adaptation planning, boost local government capacity, and support a proactive, sustainable, and equitable approach to coastal resilience planning and project implementation.

The County will pursue strategies that strengthen community preparedness and safeguard businesses and residents against increasingly frequent and intense storm events. Resilience-related projects have many co-benefits like placemaking, greening public places, or improving existing infrastructure.

Planning Process Overview

Components Included in the Resilience Strategy

The resilience strategy is the main outcome of this process. The components of the resilience strategy include:

- Vision & Goals**
Defines long-term objectives for climate resilience and flood mitigation.
- Summary of Existing Efforts**
Consolidated review of local and regional initiatives.
- Stakeholder Engagement Overview**
Documentation of input and participation.
- Flood Risk & Vulnerability Assessment**
Detailed analysis of hazards and impacts.
- Project Portfolio**
Prioritized list of resilience actions with timelines

We want to hear from you! Share your thoughts below.

What worries you most about flooding, storms, or sea-level rise in Pasquotank County?

What's working well in Pasquotank County's approach to preparing for and recovering from storms and other hazards?

What would you like to see the County do to improve our ability to prepare for, respond to, and recover from hazard events?

Figure 2. Tabling Materials Developed for Pop-Up Events

Community feedback from this outreach effort highlighted that flooding and property damage are by far the dominant concerns, with repeated mentions of home damage, loss of property, and flood-related impacts, alongside worries about infrastructure reliability (especially roads), septic and water systems, and public safety. Residents also noted secondary concerns such as saltwater intrusion and ecosystem loss. In terms of what's working, people generally appreciate communication efforts, stormwater policies, and the drainage committee, though comments were limited. For future actions, there is strong support for improving drainage and infrastructure, increasing funding, enhancing public education, and adopting nature-based solutions (like tree planting and shoreline protection), as well as smarter development and long-term planning for sea level rise.

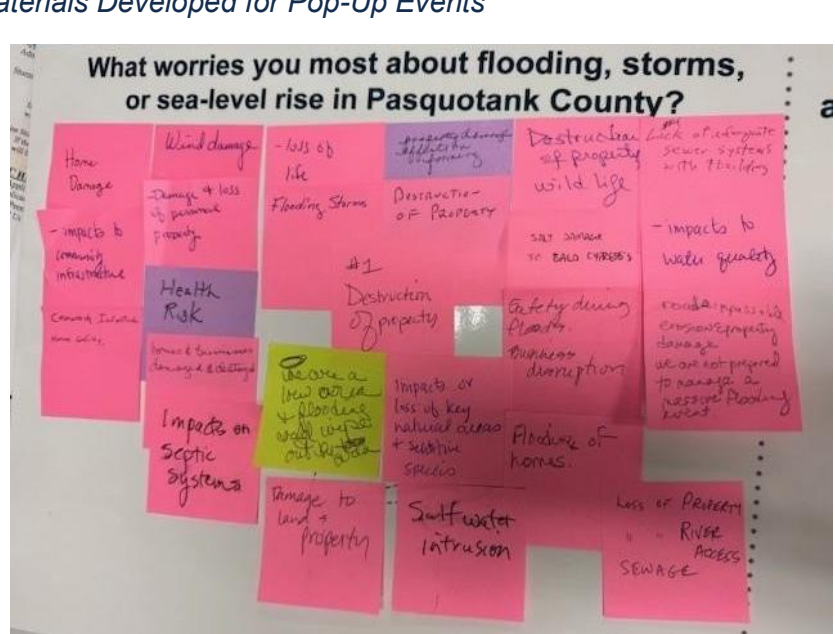


Photo 5. Participants engaged with pop-up materials through sticky notes.

Survey Results

A public input survey was developed in the beginning of the planning process. This survey was open from February to May of 2026. It was advertised on a public flyer and at the virtual workshop. The information from this survey was incorporated into the goal and vision statements developed in Section 3.

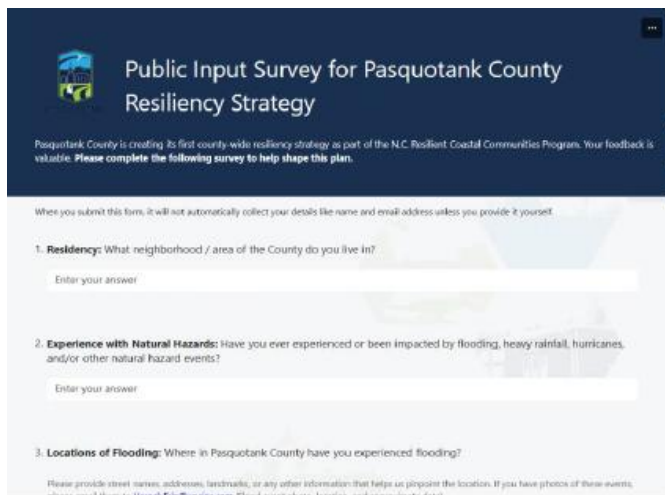


Figure 3. Screenshot of Public Input Survey

lying rural and waterfront areas influenced by wetlands, creeks, and wind-driven water levels. These patterns indicate a combination of stormwater drainage limitations, tidal influence, and flooding associated with low-elevation terrain.

All participants indicated that they were concerned about the possibility of Pasquotank County being impacted by storm events and floods. Most residents have taken steps to prepare their property for hazard events. Residents most commonly reported undertaking hazard mitigation and drainage-related improvements, including tree removal, roof strengthening, and sump pump installation. More advanced flood resilience measures, such as elevating structures or installing shoreline protection, were less frequent and generally limited to higher-risk or waterfront properties. A smaller number of households have invested in energy resilience measures like generators and solar installations, while a portion of respondents reported taking no protective actions, indicating potential gaps in capacity or awareness.

Feedback in the survey regarding action development emphasized the need for improved stormwater management, including enhanced drainage maintenance, system upgrades, and development of a countywide stormwater management strategy. Residents also supported infrastructure investments to address flood-prone roadways and aging water systems, alongside nature-based solutions such as wetland preservation and tree planting. Additional priorities included strengthening floodplain regulations, improving septic system management, expanding emergency preparedness measures, and increasing public education. Overall, responses reflect a strong desire for both immediate drainage improvements and long-term, integrated resilience planning.

A total of 13 residents participated in the survey, with representation from Riverside, Nixonton, Newbegun Land, and neighborhoods such as Hickory Acres, The Waters at Sunset Pointe, and Glen Cove.

All participants indicated that they had experienced or had been impacted by flooding, heavy rainfall, and hurricanes. Within these responses, residents indicated that these events have led to collapsed roads, school and road closures, and damage to piers and docks.

Flooding concerns were most frequently identified along major corridors including Weeksville Road, Nixonton Road and its surrounding rural network, and the Riverside/Charles Creek area. Additional hotspots were noted in southern Elizabeth City (Southern Avenue, Dawson Street, and Eringhaus Street), as well as in low-

“...increasing floodplain regulations to avoid development (including fill) in the floodplain...”

“Maintaining drainage systems on a regular basis to prevent flooding.”

“Plant more trees everywhere, preserve riparian buffers, protect wetlands...”

Figure 4. Suggested Action Examples from Survey

Workshop Results

Two workshops were conducted as part of the planning process to engage community members and gather input. These live events provided residents with opportunities to learn about key components of the Resiliency Strategy, including the vulnerability assessment and the development of actions, while also offering a forum for participants to share feedback and perspectives.

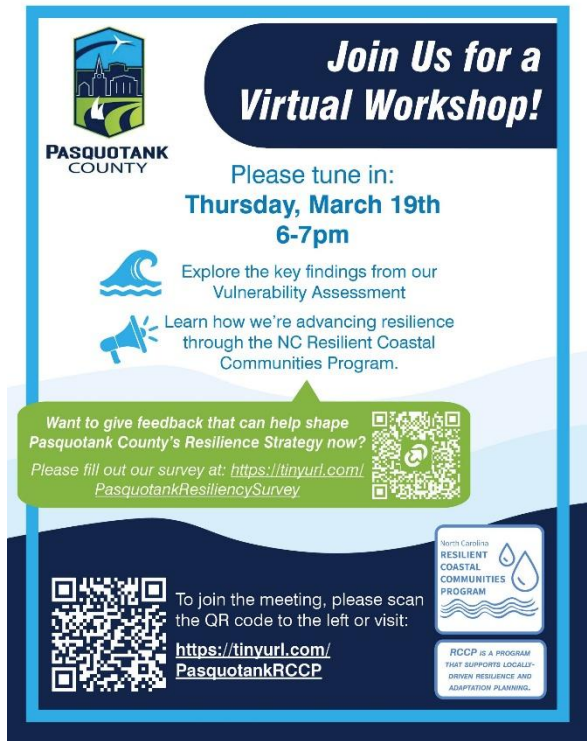


Figure 5. Flyer advertising Workshop 1

features and improvements, such as the development of safe bike trails, addressing blue-green algae blooms in the river, strengthening policies to reduce nonpoint source pollution, and managing saltwater intrusion. Overall, participants unanimously prioritized enhancing natural resource conservation and expanding recreational access.

Workshop 2

The second workshop was held on April 15, 2026 from 5:30 – 7:30 PM at the Pasquotank County Public Library. To advertise for this workshop, a public flyer was also developed and posted on the County's Facebook and distributed to the CAT. Additionally, participants who completed the public survey and indicated that they were interested in being contacted for this workshop were notified ahead of time. Although the workshop was publicly advertised and open to all interested participants, attendance was primarily composed of members of the CAT.

Workshop 1

The first workshop was held on March 19th, 2026 from 6:00 – 7:00 pm through Microsoft Teams. This workshop was advertised through a public flyer ahead of time, shown in Figure 5, and posted on the County's Facebook and distributed to the CAT. Additionally, participants who completed the public survey and indicated that they were interested in being contacted for this workshop were notified ahead of time.

The workshop content included an overview of the RCCP process, project approach and schedule, findings from the existing plan review summary, and vulnerability assessment methodology and preliminary results. As a part of this presentation, participants were asked to access some questions through the online engagement software Slido. These findings were incorporated into *Section 3. Vision and Goals*. The workshop slides can be found in Appendix B.

During the Slido session, participants identified several aspects of the County they value most, including its proximity to the Outer Banks and Hampton Roads, access to waterways for activities such as kayaking, its small-town character, and the presence of the Pasquotank River. Participants also highlighted desired

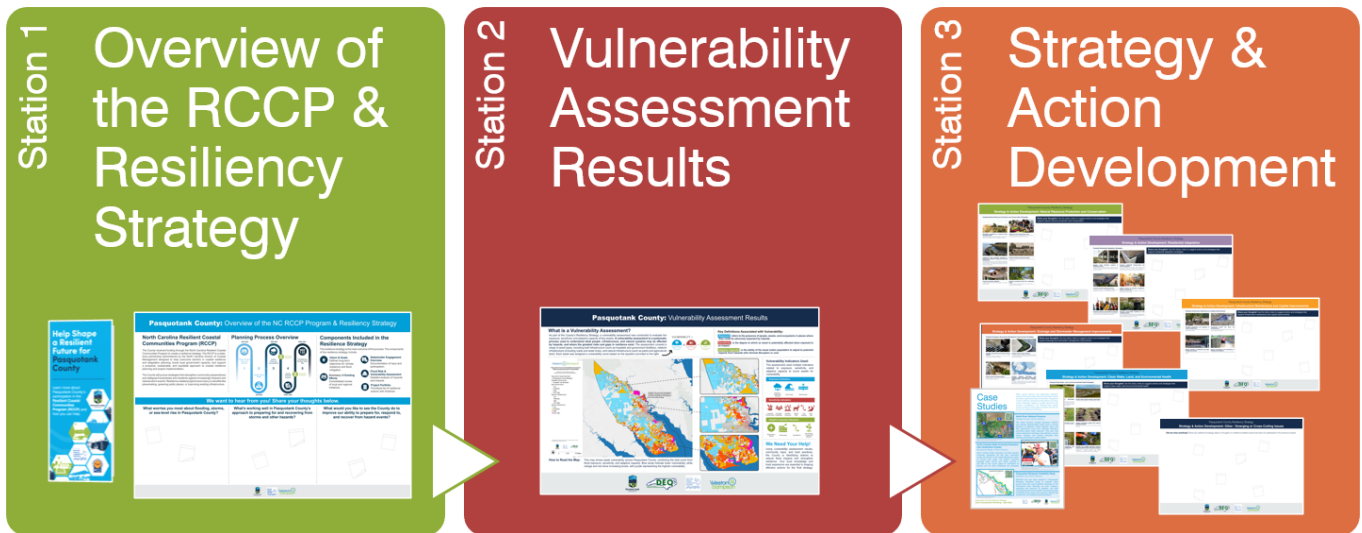


Figure 6. Station Format of Workshop 2

This workshop was an open house, drop-in style format. A quick presentation was given in the beginning of the workshop session, detailing the RCCP prioritized, synthesized vision and goals, and a walk through of stations. These slides can be found in Appendix B. There were three stations set up in the room: a check-in station with project overview materials, a vulnerability assessment results board with separate map print outs for flood hazards, and a longer table with six boards to generate actions. These stations are shown in Figure 6.

The primary goal of this workshop was to generate actions that could be compiled and prioritized by the CAT to end up in *Section 7. Project Portfolio*. The last station focused on action development, with five categories formed based on previous engagement results and resilience planning priorities. The categories included:

- Natural Resource Protection and Conservation
- Residential Adaptation
- Drainage and Stormwater Management Improvements
- Infrastructure Maintenance and Capital Improvements
- Clean Water, Land, and Environmental Health



Photo 6. CAT Members Leaving Feedback on Action Boards

Key themes and insights from engagement highlighted flooding and drainage as central concerns, along with the need for watershed-based planning and stronger regional coordination. Participants emphasized the importance of balancing growth with protection of the natural environment and expressed interest in nature-based, multi-benefit solutions. Public access, education, and community awareness also emerged as important priorities. Several cross-cutting opportunities were identified, including developing a drainage basin or watershed study to help prioritize projects; expanding monitoring systems such as flood gauges and groundwater tracking; exploring eco-tourism and agritourism as economic development strategies; increasing Parks & Recreation capacity to support access and stewardship; and incorporating resilience findings into broader planning efforts, such as transportation planning.

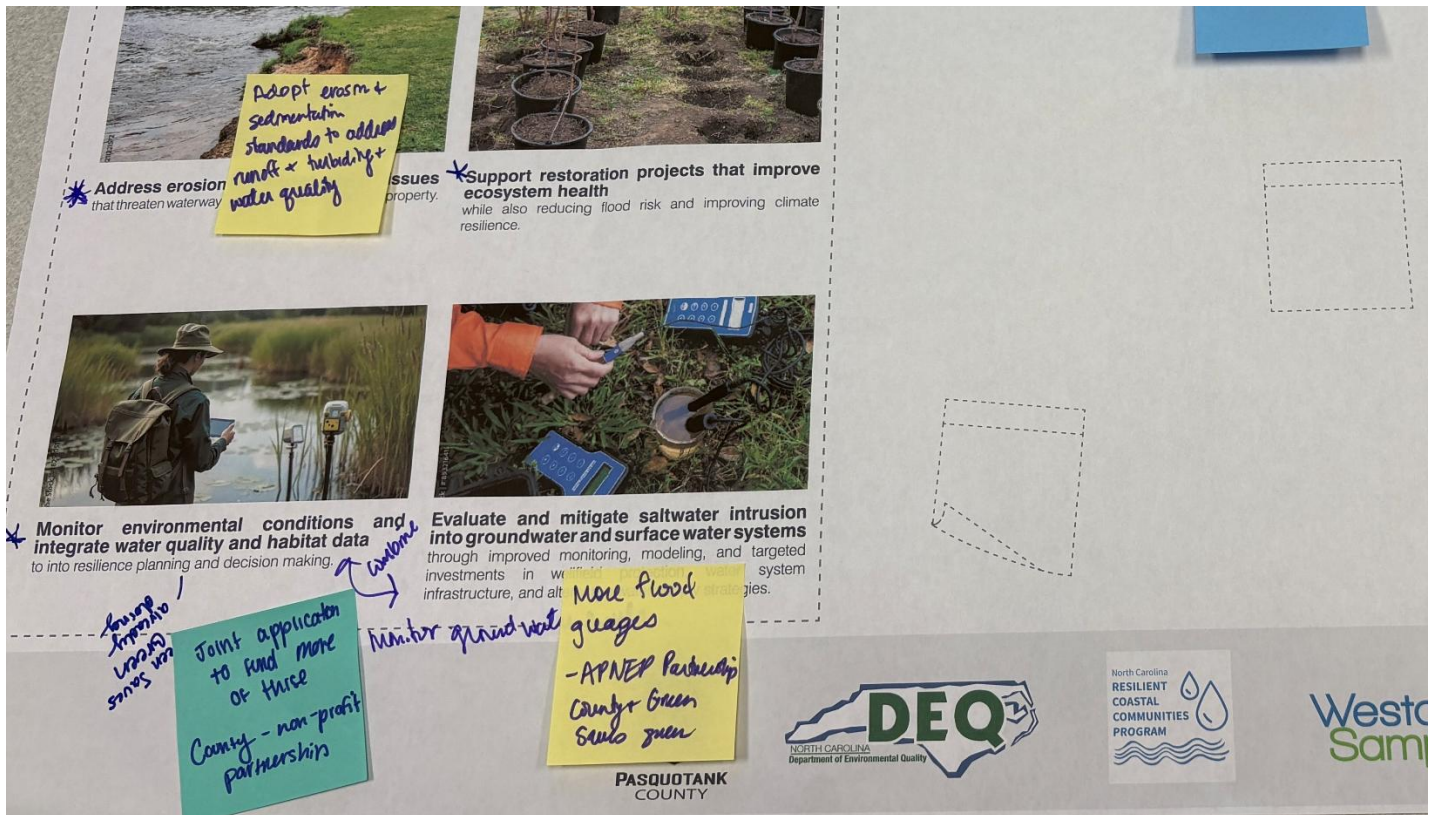


Photo 7. Participants Feedback on Action Development Board

6. Risk and Vulnerability Assessment

The risk and vulnerability assessment was conducted concurrently and completed in two steps, beginning with the vulnerability assessment. A vulnerability assessment was completed to better understand how important community facilities and services could be affected by flooding. This process involved identifying critical assets and determining which of them are most vulnerable to flood impacts. It also examined how flooding could disrupt services and affect the community. The risk assessment estimated the potential impacts by quantifying the overall value that could be affected by flooding, helping to better understand the scale of possible damages.

The risk and vulnerability assessment is a key component of Phase 1 of the RCCP and informed Phase 2, the project portfolio. The project portfolio includes potential projects that help mitigate the vulnerability of critical assets and help enhance the resilience of Pasquotank County. More details about the vulnerability assessment methodology are in Appendix C.

Vulnerability Assessment

Critical Asset Identification

The critical assets and natural infrastructure assets evaluated in this assessment were identified using the NC Resilient Coastal Communities Planning Handbook. For this assessment, critical assets are defined as facilities, systems, and locations that support essential community functions and serve as community lifelines before, during, and after hazard events. These assets can include a wide range of physical, institutional, and service-based resources that are important to public safety, daily operations, emergency response, and long-term community resilience. The critical asset categories considered in this assessment include:

- **Transportation:** roadways, marinas, boat ramps, airport, bus station, fuel stations
- **Food Retail:** convenience stores, grocery stores
- **Utilities and Lifeline Services:** cell towers, substation, solid waste facility, pump stations, water lines
- **Financial and Economic Services:** credit unions, major employers, grain elevators, agricultural land in active production
- **Natural Resources:** open space and conservation lands (parks, open space, easements, burrow pit, buyout property), Managed Areas, Natural Heritage Natural Areas
- **Government Facilities:** municipal buildings, fire station, correctional institution
- **Cultural and Community:** community center, churches, schools

While no medical or public health assets were identified within the County's jurisdictional boundaries, several key regional facilities, including those located in Elizabeth City, serve County residents and depend on resilient transportation and utility connections. Also, agricultural lands were included in the assessment because they provide significant economic, flood-storage, drainage, water-quality, ecological, and community resilience benefits. The County should continue to identify and prioritize productive agricultural lands and working farms, particularly in areas facing development pressure and where conversion could result in increased long-term public infrastructure and service costs.

Table 5 presents a summarized count of each asset type. Through this process, a total of 8,680 critical assets were mapped and evaluated. The preliminary asset inventory was shared with the CAT during the January 2026 kick-off meeting through an online ArcGIS survey, and the asset list was refined based on their feedback.

Table 5. Count of Asset by Type

Asset Type	Asset Count
Transportation	4,257
Emergency Services	5
Utilities and Lifeline Services	2,688
Financial and Economic Services	1,670
Natural Resources	45
Government Facilities	6
Cultural and Community	10



Photo 8. Pasquotank County Substation, Weston & Sampson

Asset Inventory

Pasquotank County Resiliency Strategy | July 2026

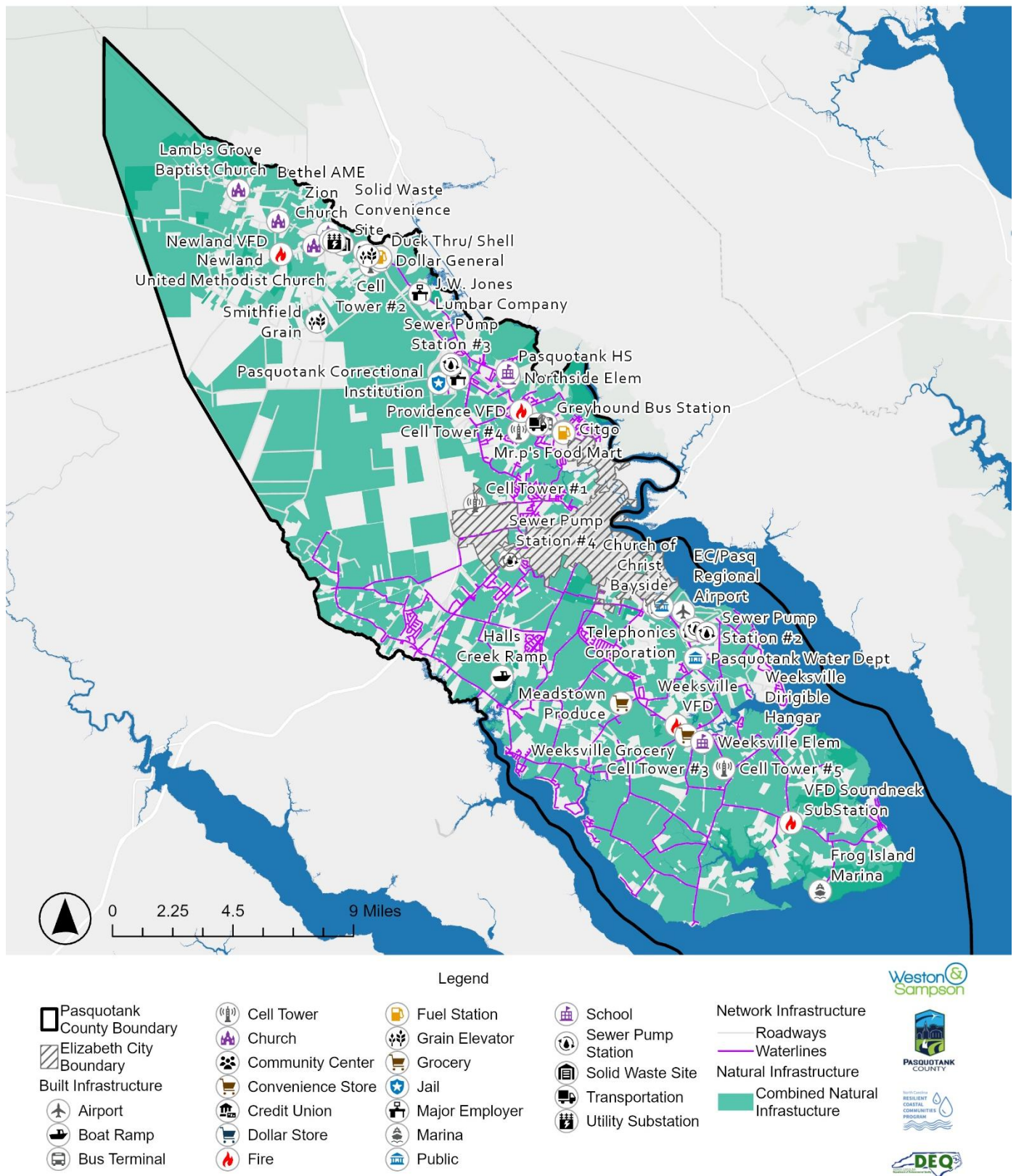


Figure 8. Vulnerability Assessment Results for Asset Inventory

Hazard Identification and Extents

To better understand potential climate hazards that the County faces, an existing conditions analysis was conducted in the beginning steps of Phase 1. The existing conditions analysis identified relevant reports and assessments that identified potential hazards and resilience strategies for Pasquotank County and the Albemarle region.

The NC Resilience Exchange publishes climate projections and observations from climate models for North Carolina municipalities. The following historical flood events and future projections by 2060 are shown in Table 6. These values were not directly integrated into the assessment but provide important contextual information on historical and projected flood conditions.

Table 6. North Carolina Resilience Exchange Historical and Project Flood Data

Hazard	Historical (1983 to 2014)	Best Case Scenario (By the 2060s)	Worst Case Scenario By the 2060s
Heavy Rain – Days with Precipitation of 2 or more inches	15 days	19 days	20 days
Sea Level Rise	0.5 feet	1.1 feet	1.4 feet
Sunny Day Flooding	28 days	85 days per year	95 days per year

The climate hazards evaluated in this analysis were identified in the 2020 *Albemarle Regional Hazard Mitigation Plan* and are required by NC RCCP as part of the vulnerability assessment process.⁴ These hazards include historical flooding, current coastal and riverine flooding, storm surge, and projected future sea level rise (tidal flooding) and are shared in Table 7. All identified hazards were mapped using ArcGIS Pro and are included in the appendix of this document.

Table 7. Hazard Identification & Sources

Hazard	Dataset
Present / Historical Riverine Flooding	NC FRIS ⁵
Projected Category 2 Hurricane Storm Surge (SLOSH) Maximum of Maximums (MOM)	National Storm Surge Hazard Maps ⁶
Present / Projected Tidal Flooding	NOAA Sea Level Rise ⁷

Flooding in Pasquotank County, particularly in coastal sound-side areas, is strongly influenced by wind-driven water movement and tidal conditions, which can exacerbate water levels beyond what is captured in standard geospatial flood datasets. In low-lying coastal communities with extended wind fetch, the unobstructed distance wind travels, sustained winds can elevate local marine water levels even under typical tidal conditions, increasing flood risk.⁸ While SLOSH Maximum of Maximums (MOM) data capture hurricane-driven storm surge resulting

⁴ Albemarle Region, North Carolina. (2025). Albemarle Regional Hazard Mitigation Plan.

https://static1.squarespace.com/static/5b0584b6aa49a1a281fb3205/t/60c25c6c56a8b7130b6a53c6/1623350410080/Albemarle_Regional_HMP_Complete_Draft.pdf

⁵ North Carolina Floodplain Information Risk System (FRIS). North Carolina Department of Public Safety, North Carolina Emergency Management. Available at: <https://fris.nc.gov/>

⁶ National Storm Surge Hazard Maps. National Hurricane Center (NHC), National Oceanic and Atmospheric Administration (NOAA). Available at: <https://www.nhc.noaa.gov/nationalsurge/>

⁷ NOAA Sea Level Rise Viewer. National Oceanic and Atmospheric Administration (NOAA), Office for Coastal Management. Available at: <https://coast.noaa.gov/slr/>

⁸ Thelen, T., Anarde, K., Dietrich, J. C., & Hino, M. (2024). *Wind and rain compound with tides to cause frequent and unexpected coastal floods*. Water Research, 266, 122339. <https://doi.org/10.1016/j.watres.2024.122339>

from extreme wind forcing, they do not account for non-storm wind-tide flooding, day-to-day tidal variability, or compound flooding processes. As a result, wind-driven and tidal flooding in sound-side areas that occurs outside of hurricane events may not be fully represented in SLOSH-based geospatial datasets.



Photo 9. The Pasquotank River, Weston & Sampson

Methodology

The vulnerability assessment evaluated the relative vulnerability of critical assets and natural infrastructure within Pasquotank County to identify climate hazards. The methodology was developed as a planning-level screening tool to support comparison across a large and diverse asset inventory and to help identify priorities for future investigation, mitigation, and resilience investment. Vulnerability was assessed using the framework outlined in the NC RCCP Planning Handbook:

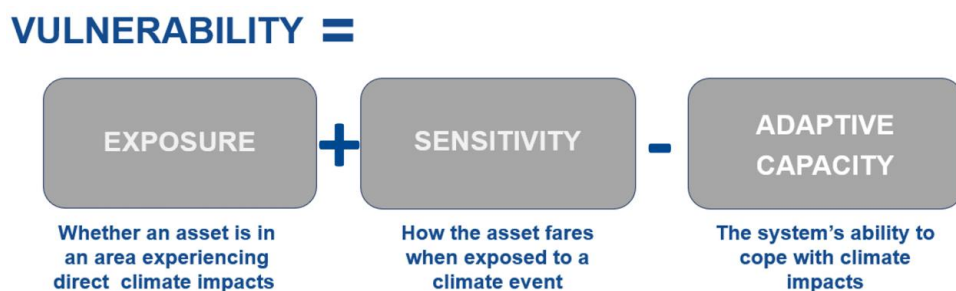


Figure 9. Vulnerability Equation used in Vulnerability Assessment

In this framework, exposure reflects whether an asset is located within the extent of a mapped hazard, sensitivity reflects how severely the asset or the people it serves may be affected if exposed, and adaptive capacity reflects the asset's ability to withstand, absorb, or recover from hazard impacts. Because this is a screening-level assessment, results are intended to support prioritization and planning rather than site-specific engineering or design decisions.

This methodology is intended as a screening-level assessment and relies on the best available countywide GIS datasets at the time of analysis. As a result, scores are influenced by data resolution, asset representation type,

and the availability of indicator data for different asset classes. The results should therefore be used to compare relative vulnerability across the inventory and to identify planning priorities, but not as a substitute for site-specific engineering analysis, operational assessment, or design.

Scoring

The project team worked with the County and the CAT to develop appropriate exposure, sensitivity, and adaptive capacity indicators for the vulnerability assessment. Table 8 lists the indicators used in the vulnerability assessment. More details about the indicators can be found in Appendix C.

Table 8. Vulnerability Assessment Indicators

Category	Indicator
Exposure	Flood Risk Information System (FRIS) – Present
	Category 2 Storm Surge
	Present and Projected Tidal Flooding
Sensitivity	Experienced Historic Flooding (Survey-Based)
	Social Vulnerability (SVI)
	Criticality (FEMA Community Lifelines)
	Pipe Diameter
	Road Type
	Biodiversity / Wildlife Habitat Value
Adaptive Capacity	Redundancy
	Building Age
	Pipe Material
	Soil Drainage
	Presence of Wetlands

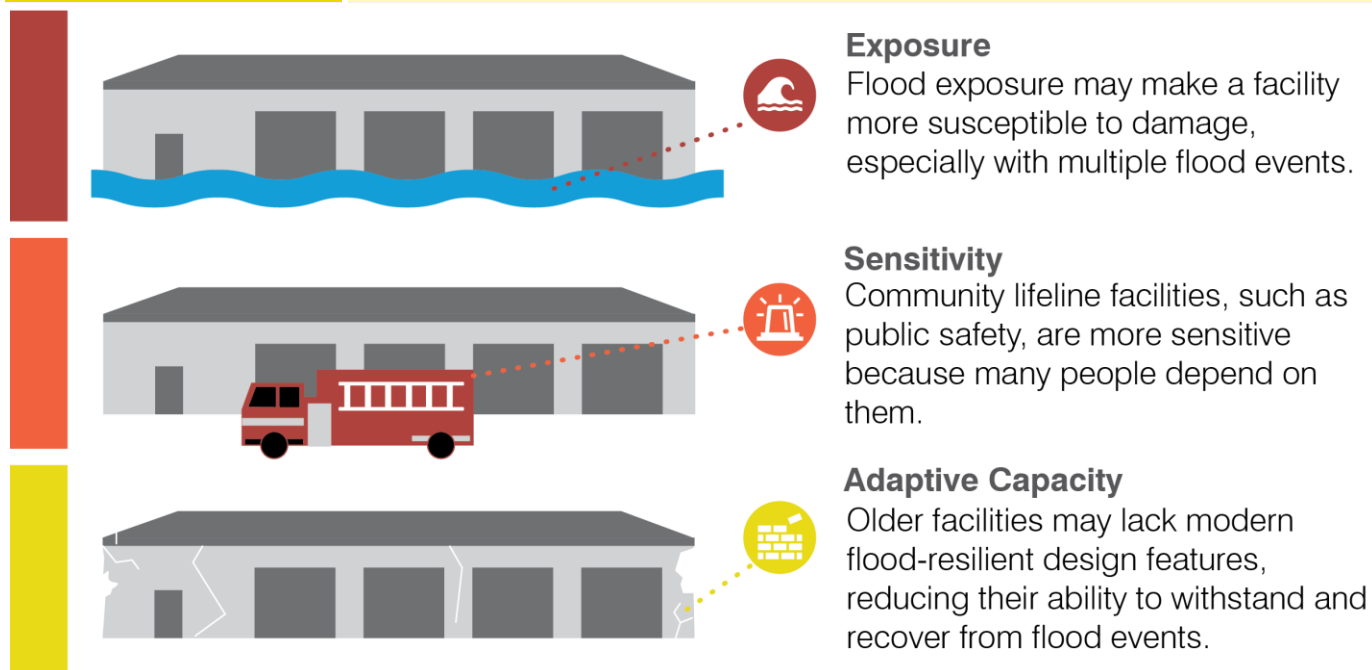


Figure 10. Example of How Vulnerability Indicators Apply to a Fire Station

The vulnerability assessment applied a 0–2 scoring scale for each indicator listed above in Table 8. Final vulnerability scores were grouped into four categories: Low, Moderate, High, and Very High Vulnerability. These categories were used to summarize the relative distribution of vulnerability across the asset inventory and to identify assets that may warrant additional evaluation, prioritization, or resilience investment. The scoring thresholds used for these classifications are provided in Figure 11.

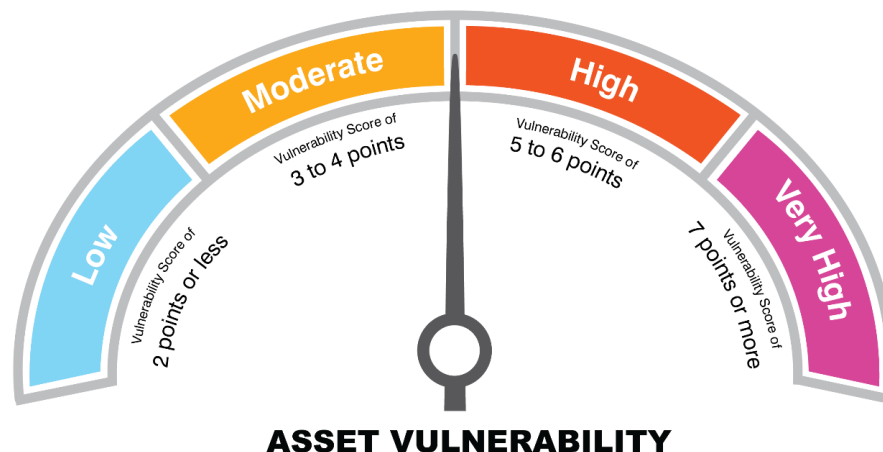


Figure 11. Scoring Thresholds for Vulnerability Assessment

Findings

The vulnerability assessment results provide a countywide screening of how assets compare in terms of relative exposure, sensitivity, and adaptive capacity. The results are intended to support prioritization of projects and should be interpreted as a comparative planning tool rather than a prediction of exact damage or failure. All assets, including built infrastructure, network infrastructure, and natural infrastructure, were scored for vulnerability and this information is available in Appendix C. Map products summarizing the results are included in Appendix D.

The County should consider integrating the findings of the vulnerability assessment into future updates to land use policies, zoning regulations, subdivision standards, development review processes, watershed planning initiatives, and other relevant planning and regulatory mechanisms.

The vulnerability assessment identified a concentration of assets (12.9% of the total assets assessed) with High Vulnerability (2,376 assets) and Very High Vulnerability (493 assets) reflecting a combination of significant flood exposure, system criticality, and limited adaptive capacity. These assets are concentrated within a small number of critical buildings and systems rather than being evenly distributed across asset types, highlighting the importance of key facilities that support community functioning during hazard events.

It is important to consider both the number of assets classified as High and Very High vulnerability to understand the overall scale of vulnerability for the county. However, because asset categories vary significantly in size, with the network infrastructure grouping such as roadways and water lines dominating the total asset count, the vulnerability analysis focuses on percentages rather than raw counts. Specifically, the findings emphasize the proportion of assets within each category that scored High or Very High vulnerability. From an adaptive capacity perspective, a higher proportion of assets classified as highly vulnerable represents a significant concern. The four asset categories with the highest proportions are natural resources, cultural and community assets, government facilities, and transportation assets. These categories and their respective assets are further analyzed and described in the sections that follow.

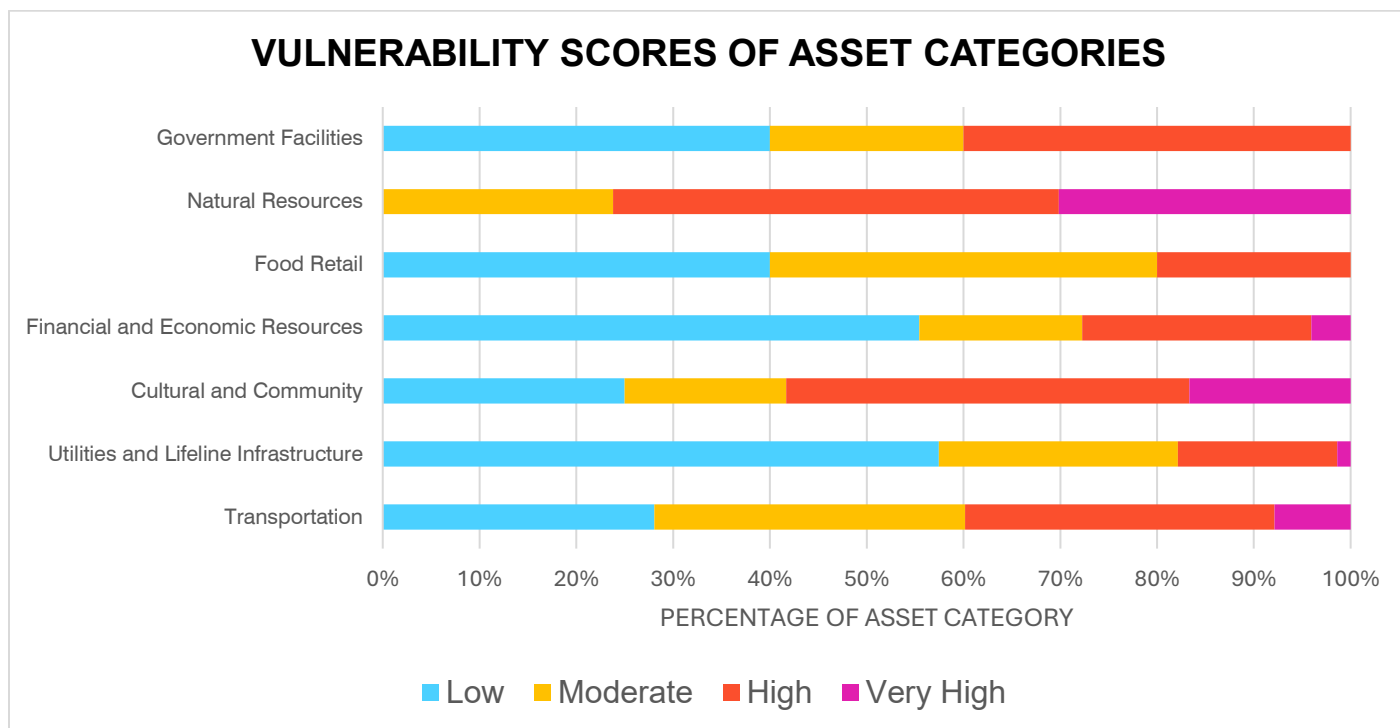


Figure 12. Vulnerability Scores of Asset Categories

Natural Resources

None of the natural resources included in the vulnerability assessment scored low, rather a large proportion of them scored High (46% of asset group) and Very High (30% of asset group) respectively. The Natural Resource asset grouping contained open space and conservation lands (parks, open space, easements, burrow pit, buyout property), Managed Areas, and Natural Heritage Natural Areas. Some of the highest scoring assets were the Coast Guard Base (Managed Area), Knobbs Creek (Easements), Pasquotank River/Canal Junction Swamp (Natural Heritage Natural Area), Shipyard Landing (Natural Area), Big Flatty Creek Forests and Marshes (Natural Heritage Natural Area), Little Flatty Creek Forests and Marsh (Natural Heritage Natural Area), Mead's Pool (Park), and Sawmill Park (Park). Although agricultural lands are sometimes considered natural resources, for this vulnerability assessment, these lands were placed within the financial and economic resources asset categories due to their significant contribution to the local and regional economy. Many of these agricultural lands along the coast scored as High or Very High vulnerability as well.



Photo 10. Sawmill Park, Weston & Sampson

Cultural and Community

There were ten cultural and community assets evaluated for the vulnerability assessment. These assets included churches, schools, and a community center. This asset category had the second-highest proportion of assets classified as High (42%) and Very High (17%) vulnerability. The highest scoring assets were Bethel AME Zion Church (Church), Newland United Methodist Church (Church), Church of Christ Bayside (Church), Weeksville Elementary School (School), and Mount Carmel Missionary Baptist Church (Church).

Government Facilities

There were only five government facilities evaluated for the vulnerability assessment, which are classified as fire stations, correctional facility, and public assets. This represented the third-largest share of assets receiving high and very high vulnerability scores, including a score of 40% for High Vulnerability and no assets scoring Very High. The highest scoring assets included the Weeksville VFD (Fire Station) and US Coast Guard (Public Asset). Although the Utility Substation, Solid Waste Convenience Site, Pasquotank Water Department could be considered government facilities, these were included in the utilities and lifeline infrastructure asset type and scored Moderate to Low Vulnerability.



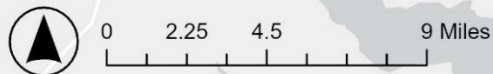
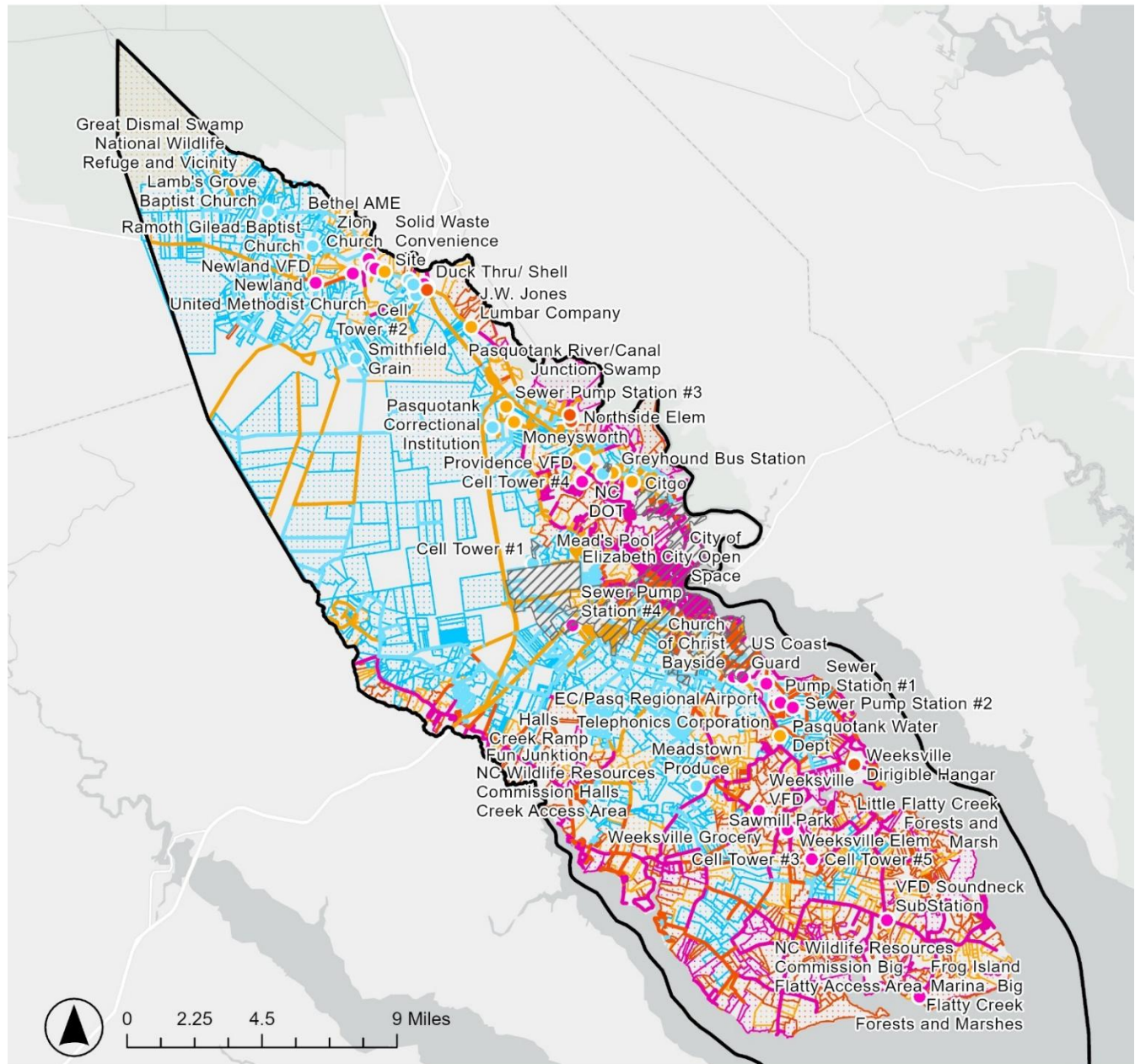
Photo 11. U.S. Coast Guard, Weston & Sampson

Transportation

There were 4,258 transportation assets evaluated for the vulnerability assessment. This is the largest amount of assets in a singular asset category. These assets include a marina, boat launch, the regional airport, fuel stations, and 4,251 roadway segments (over 700 miles). This asset category was the fourth highest proportion of assets classified as High (32%) and Very High (8%) vulnerability. While this asset category has only the fourth-highest proportion of vulnerability scores, it accounts for the greatest number of highly vulnerable assets overall, totaling 1,841. The highest scoring assets were the Frog Island Marina (Marina) and roadways including portions of US Route 17, Fairfax Ave, Hunter Street, E Elizabeth Street, Rivershore Road, N Road Street, Esclip Road, N Road Street, and Meadstown Road.

Vulnerability Assessment Results: Asset Inventory Scored

Pasquotank County Resiliency Strategy | July 2026



Legend

Pasquotank County Boundary	Built Infrastructure	Network Infrastructure	Natural Infrastructure
Elizabeth City Boundary	Low	Low	Low
	Moderate	Moderate	Moderate
	High	High	High
	Very High	Very High	Very High

Data Source: Weston & Sampson, based on a comprehensive analysis of asset vulnerability, sensitivity, and exposure indicators.

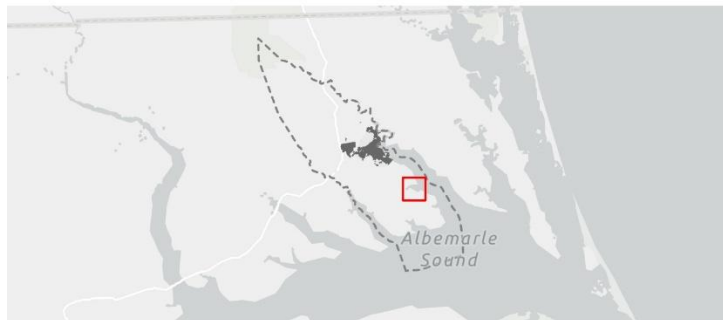
Weston & Sampson



Figure 13. Vulnerability Assessment Results for Asset Inventory

How Vulnerability Assessment Layers Interact

Pasquotank County Resiliency Strategy | September 2026



This figure presents a series of maps focused on the area outlined by the red box on the overview map. The maps illustrate flood hazard exposure and demonstrate how asset vulnerability scores were developed and applied during the assessment.

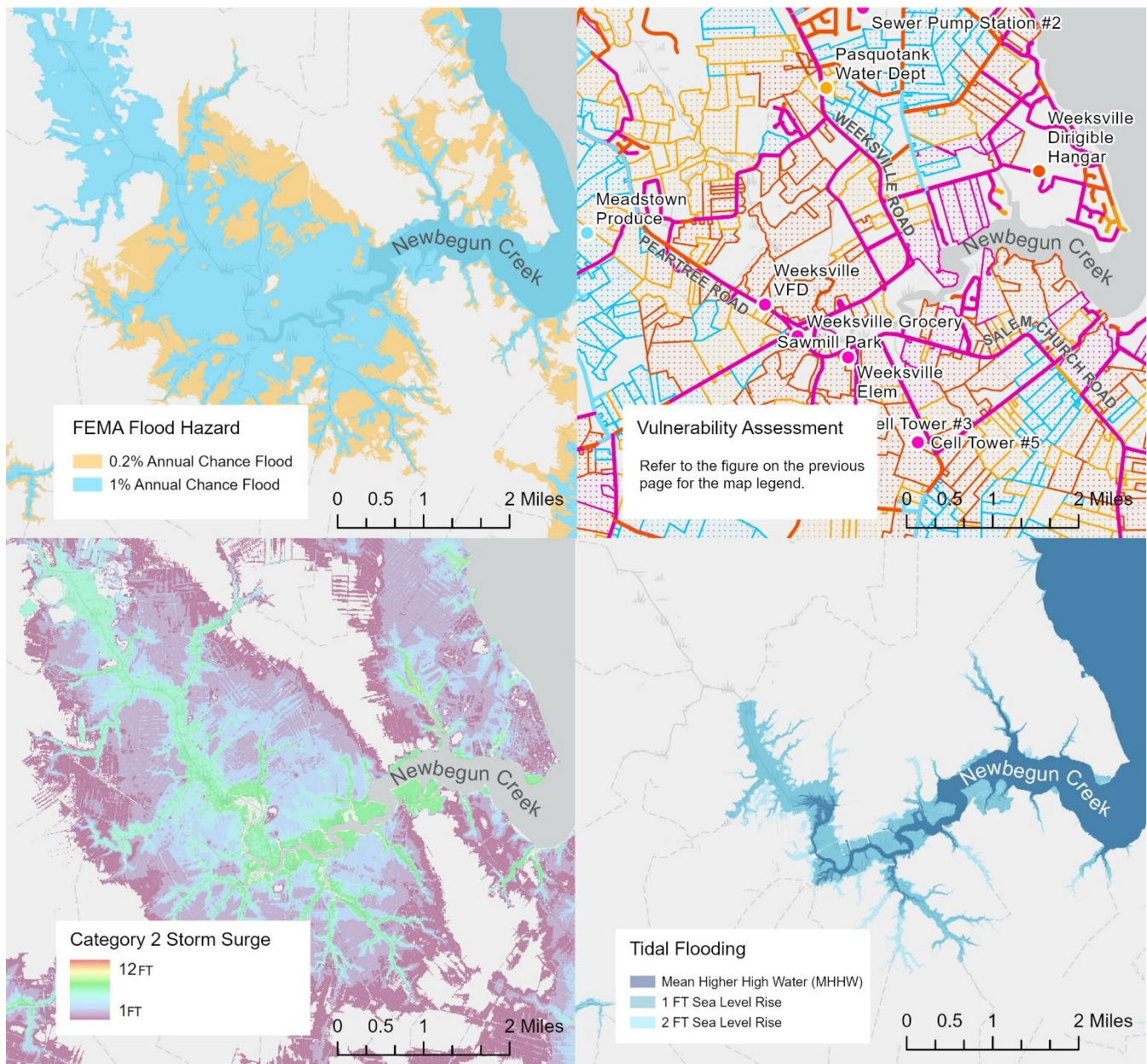


Figure 14. Example of the Combined Influence of Flood Hazard Exposure Layers on Vulnerability Assessment

Risk Assessment

Risk estimation is a critical component to using vulnerability assessment results and making informed decisions about asset management and project prioritization. In this assessment, risk was estimated by combining asset vulnerability with a proxy for asset value to represent the relative potential impact across asset types.

Risk was estimated by combining each asset's vulnerability score with a planning-level estimate of asset value. Built and natural infrastructure were valued using parcel-based proxies from the North Carolina Parcel dataset, while roadway network values were estimated using unit replacement costs based on roadway length and route classification. These values are intended to support relative prioritization and should not be interpreted as precise replacement costs, ecosystem service values, or economic losses.

Results

The results of this analysis yielded the grouped asset values, shown in Table 9.

Table 9. Grouped Risk Estimates by Asset Category

Asset Type	Number of Highly Vulnerable Assets*	Risk Value of Highly Vulnerable Assets*	Risk Value of All Assets Regardless of Vulnerability
Cultural and Community	7	\$3,924,700	\$35,182,000
Financial and Economic Resources	483	\$24,356,000	\$107,884,600
Food Retail	1	\$76,400	\$2,051,100
Government Facilities	2	\$129,261,000	\$160,422,500
Natural Resources	30	\$277,587,800	\$468,146,100
Transportation	1,841	\$529,168,704	\$1,323,275,262
Utilities and Lifeline Infrastructure	487	\$51,287,490	\$278,019,962

**Highly Vulnerable Assets are defined as assets that scored "High Vulnerability" or "Very High Vulnerability".*

Differences between the number of assets at risk and the total value of those assets reflect variations in asset type and valuation methods across asset types. Some asset types include a large number of relatively low-value assets while others include a small number of high-value facilities. As a result, asset counts and total value at risk may differ substantially.

Transportation

The asset type with the highest total value of assets scoring High Vulnerability or Very High vulnerability was Transportation. This asset type primarily includes roadway network infrastructure and built infrastructure assets related to transportation, valued using unit-based replacement cost estimates, as well as several high-value built assets such as the Elizabeth City / Pasquotank Regional Airport, Greyhound Bus Station, NC DOT facility, fuel stations, Frog Island Marina, and Halls Creek Ramp. The highest-value asset in this asset type was the regional airport with an estimated value of \$ 129,220,100. Additionally, portions of Moukawsher Drive and Waldorf Road were valued at \$10,235,514 and \$9,676,675 respectively.

Natural Resources

The asset type with the second highest total value of assets scoring High Vulnerability or Very High vulnerability was Natural Resources. This asset type includes parks, Natural Heritage Natural Areas, and marshlands. The large aggregate values reported for this asset type reflect the extensive geographic area encompassed by these assets and the parcel-based valuation approach used, rather than an estimate of replacement cost, restoration cost, or ecosystem service value. Large, contiguous conservation parcels can therefore dominate total value estimates due to land area alone. The highest-value asset in this asset type was the Great Dismal Swamp National Wildlife Refuge and Vicinity with an estimated value of \$ 189,926,900. Shipyard Landing Natural Area had an estimated value of \$141,772,900 and the Coastal Guard Base had an estimated value of \$129,220,100.



Photo 12. Duck-Thru Fuel Station, Weston & Sampson

7. Project Portfolio

Phase 2 of the RCCP focuses on developing a portfolio of resilience projects designed to reduce exposure and sensitivity to hazards while strengthening the adaptive capacity of community assets, infrastructure, and vulnerable populations. Building upon the foundational plans, studies, and initiatives described in *Section 4. Review of Existing Efforts*, this phase identifies and prioritizes projects for inclusion in the County's Project Portfolio.

A list of potential projects was presented during the community workshop and subsequently shared with the Community Action Team (CAT) in May to gather feedback and identify implementation priorities for Pasquotank County. The resulting priority projects are documented using the framework outlined in the RCCP Planning Handbook.

To support implementation, projects and actions are organized under broader resilience objectives and phased according to anticipated timing. This approach helps distinguish near-term actions that can begin immediately from mid-term and long-term initiatives that require additional planning, partnerships, funding, or project development. These phased actions provide a roadmap for making measurable progress toward the County's resilience goals over time.

Objectives for the Project Portfolio

Actions within the Project Portfolio are organized into a set of overarching objectives that provide a framework for developing and implementing resilience actions. These objectives support the achievement of the plan goals identified in *Section 3. Vision & Goals* while also reflecting priorities expressed by community members, stakeholders, and the CAT throughout the planning process. In addition, the objectives incorporate resilience planning best practices and strategies tailored to Pasquotank County's unique needs, vulnerabilities, and opportunities. The objectives for the Project Portfolio are as follows:

1. Strengthen Flood Risk Assessment and Planning
2. Enhance Stormwater, Drainage, and Transportation Infrastructure
3. Expand Usage of Nature-Based Solutions
4. Protect Natural Resources and Water Quality
5. Guide Resilient Growth and Land Use
6. Expand Public Access, Education, and Community Capacity

Each objective includes three to five actions, organized as a phased strategy and sequenced according to the preferred order of implementation. For example, actions that require a study or assessment are listed before related infrastructure improvements. Some actions under objectives are standalone and do not necessarily require a sequenced approach for funding. Each action is supported by a corresponding project page using the framework provided in the NC RCCP Handbook. The "Project Portfolio Key" elaborates on each of these elements included below.

For each priority action, the County should establish measurable implementation milestones, identify responsible departments or entities, establish target timelines, and periodically report progress to the Board of Commissioners and the public. Progress reporting should identify actions completed, actions underway, barriers to implementation, funding pursued or received and recommended next steps.

Project Portfolio Key

Actions developed for the Project Portfolio used the following key to build out each action sheet:

Element	Description
Location	Geographic area where the action will be implemented, such as a specific site, watershed, municipality, or countywide.
Source	Previous planning efforts, stakeholder input, or best practice that informed the development of the action.
Supporting Function	Community systems, services, or operational areas that the action supports such as stormwater management, emergency services, and natural resource management,
Hazards Addressed	Natural hazards or climate stressors that the action seeks to mitigate, reduce, or prepare for. This focuses on coastal flooding, stormwater flooding, shoreline erosion, and saltwater intrusion. Additional hazards addressed such as drought, extreme heat, or water quality are called out as well.
Scoping Questions	Key questions intended to guide future project development, feasibility analysis, design considerations, implementation planning, and stakeholder discussions.
Type of Solution	Primary strategy classification for the action, such as study or planning effort, policy or regulation, infrastructure improvements, nature-based solution projects, facility upgrades or adaptations, or public outreach and education.
Estimated Timeline	Expected timeframe for implementation. • Near-Term: 1-2 years • Mid-Term: 2-5 years • Far-Term: 5-10 years
Responsible Entity	Lead organization, department, or agency responsible for coordinating, managing, and implementing the action.
Potential Partners	Supporting organizations, agencies, nonprofits, utilities, academic institutions, community groups, or private-sector partners that may assist with implementation.
Existing Funding	Current funding sources, programs, or budget allocations already available to support planning, design, or implementation activities.

Potential Funding Sources	Federal, state, regional, local, nonprofit, or private funding opportunities that could be pursued to advance the action. Funding sources may include the following, but are subject to changes. Additionally, new funding sources may become available after this plan's adoption that could be suitable to support project implementation: • NC Resilient Coastal Communities Program (RCCP): Funds resilience planning, vulnerability assessments, community engagement, project design, and coastal hazard mitigation projects. • FEMA BRIC / FMA: Supports flood mitigation, infrastructure hardening, property elevation/acquisition, drainage improvements, safe rooms, and other hazard mitigation projects. • State Infrastructure Water Authority (SWIA) Loan / Grant: Funds drinking water, wastewater, and stormwater infrastructure, utility upgrades, stream restoration, and resilience-related improvements. • NC Land and Water Fund (NCLWF): Supports land conservation, easements, wetland and stream restoration, stormwater retrofits, habitat protection, and watershed planning. • National Coastal Resilience Fund (NCRF): Funds nature-based resilience projects such as living shorelines, wetland restoration, floodplain reconnection, dune restoration, and project planning/design. • Sustainable Agriculture Research and Education (SARE) Program: Supports sustainable agriculture projects focused on soil health, water conservation, climate adaptation, regenerative practices, and agricultural innovation. • North Carolina Sea Grant: Funds coastal resilience, water quality, ecosystem restoration, fisheries, coastal hazards, and community planning initiatives. • Section 205(j) Water Quality Management Planning Grant: Supports watershed assessments, water quality planning, stormwater mapping, restoration plans, and preliminary project design. • Other / Miscellaneous: Additional federal, state, nonprofit, or foundation grants supporting resilience, conservation, hazard mitigation, environmental restoration, and infrastructure improvements.
Estimated Cost	Planning-level estimate of the financial resources required to implement the action, including planning, design, permitting, construction, operations, and maintenance as applicable. • Low – less than \$100k • Medium - \$100k to \$500k • High - \$500k or greater
Anticipated Benefit	Expected resilience, environmental, economic, or social outcomes resulting from the action, including risk reduction, cost savings, ecosystem enhancement, or improved community capacity.
Priority Rating	Relative importance of the action based on factors such as risk reduction potential, feasibility, cost-effectiveness, community support, regulatory requirements, and implementation readiness. Priority rating was evaluated based on workshop feedback and CAT prioritization during an action prioritization meeting.

Objective 1: Strengthen Flood Risk Assessment and Planning

This objective seeks to develop and maintain the data, tools, and technical understanding necessary to make informed resilience and infrastructure investment decisions related to flood risk. As flooding patterns continue to evolve due to changing precipitation trends, sea level rise, and watershed conditions, the County will want to anticipate and prepare for these changes. This objective focuses on enhancing the County's ability to identify vulnerabilities, evaluate future flood conditions, and incorporate risk information into planning and capital investment decisions.

Actions under this objective include integrating vulnerability assessment findings into the Capital Improvement Program (CIP) process, identifying and mapping locations of repetitive flooding, and conducting targeted hydrologic and hydraulic (H&H) modeling in flood-prone areas such as the Knobbs Creek watershed, and evaluating the long-term impacts of saltwater intrusion on groundwater and surface water resources.

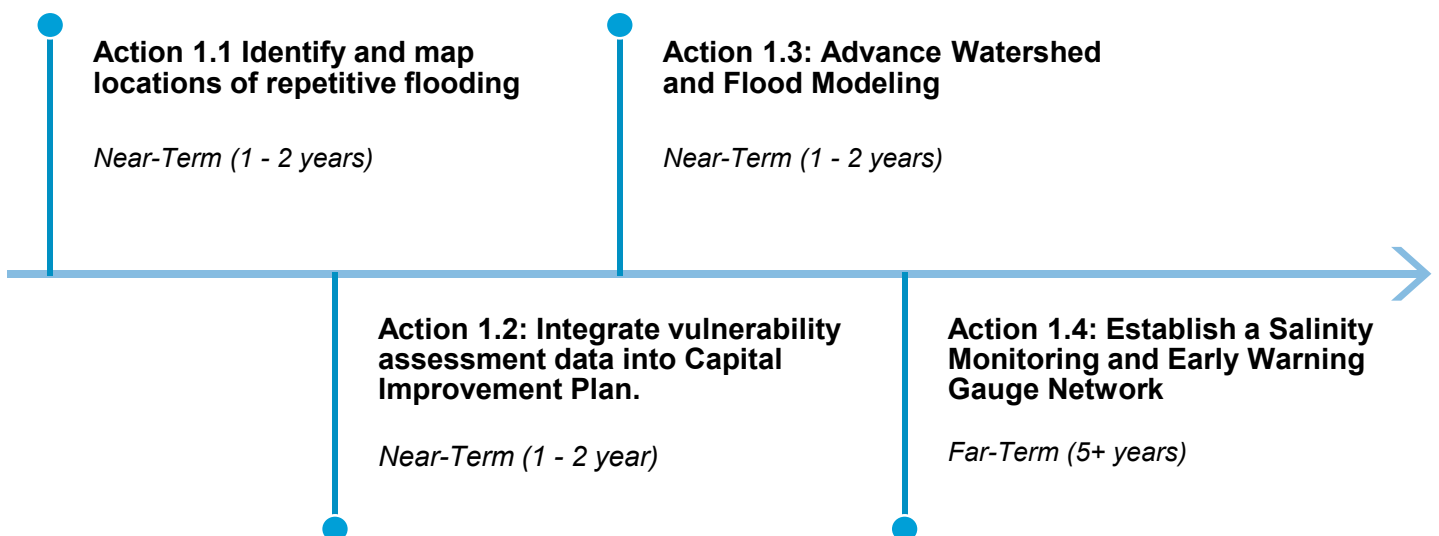


Figure 15. Wetlands in Pasquotank County, Weston & Sampson

Action 1.1: Identify and map locations of repetitive flooding.

Action Description: Identify, document, and map locations of repetitive flooding across Pasquotank County to improve understanding of recurring flood impacts and support targeted resilience investments. This action should compile information from resident reports, public survey results, workshop input, emergency management records, road closure data, drainage complaints, repetitive loss data, maintenance records, and vulnerability assessment findings. This could happen via an online data collection and reporting process. The resulting map and database should distinguish between recurring roadway flooding, property flooding, drainage system backups, tidal or wind-driven flooding, agricultural flooding, and flooding associated with stormwater conveyance constraints. This information should be maintained as a living dataset to support capital planning, grant applications, drainage prioritization, public communication, and future project development. Additionally, this action may be used to prioritize locations for targeted hydrologic and hydraulic (H&H) modeling.

Location: Countywide, with emphasis on known flood-prone neighborhoods, low-lying roadways, drainage corridors, waterfront areas, agricultural lands, and locations identified through resident input, public engagement, and the vulnerability assessment.

Source: Vulnerability Assessment; Action Development Workshop

Supporting Function: Flood Risk Assessment; Stormwater Management; Drainage Planning; Capital Improvement Planning; Emergency Preparedness.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Scoping Questions:

- Where does repetitive flooding occur most frequently across the County?
- What types of flooding are occurring at each location, and what assets or populations are affected?
- How should flood reports, resident input, road closures, maintenance records, and drainage complaints be collected and maintained over time?

Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Estimated Timeline:



Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer; Emergency Management.

Potential Partners: Pasquotank County Drainage Committee; NCDEQ

Existing Funding: Staff time; local planning and GIS resources; Emergency Management records; existing drainage committee coordination.

Potential Funding Sources:

- ☒ NC RCCP
- ☒ FEMA BRIC / FMA
- ☐ SWIA Loan / Grant
- ☐ Land & Water Fund
- ☐ NCRF
- ☐ SARE Program
- ☐ Sea Grant Office
- ☒ Section 205(j)

Estimated Cost: *Dependent on frequency of data collection and updates.*



Anticipated Benefit: Improves the County's ability to identify recurring flood problem areas, prioritize drainage and infrastructure improvements, support grant applications, document community impacts, guide capital investments, and communicate flood risk more clearly to residents, decision-makers, and partner agencies.

Priority Rating:



Action 1.2: Integrate Vulnerability Assessment Data into Capital Improvement Plan

Action Description: Incorporate vulnerability assessment results from the Pasquotank County Resiliency Strategy and repetitive flood-loss data into the County's Capital Improvement Plan (CIP) process to prioritize resilience investments and ensure future infrastructure projects account for flood risk and climate vulnerabilities.

Location: Countywide

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: NC Emergency Management, NCDOT, NCDEQ, Albemarle Commission, Engineering Consultants

Supporting Function: Stormwater Management; Infrastructure Planning

Existing Funding: Local Planning Funds

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Potential Funding Sources:

- ☒ NC RCCP
- ☐ FEMA BRIC / FMA
- ☐ SWIA Loan / Grant
- ☐ Land & Water Fund
- ☐ NCRF
- ☐ SARE Program
- ☐ Sea Grant Office
- ☒ Section 205(j)

Scoping Questions:

- What assets face the greatest flood risk?
- How can CIP investments reduce future damages?
- How should vulnerability findings be incorporated into capital planning decisions?

Estimated Cost:



Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: High benefit as it improves risk-informed decision making, guides resilience investments, and reduces future infrastructure losses.

Estimated Timeline:



Priority Rating:



Action 1.3: Advance Watershed and Flood Modeling

Action Description: Conduct targeted hydrologic and hydraulic (H&H) modeling in flood-prone areas, with a focus on the Knobbs Creek watershed, to better understand drainage constraints, future flood conditions, and potential mitigation opportunities.

Before approval of major new development in drainage-constrained watersheds, the County should require sufficient watershed-level analysis to demonstrate that the proposed development will not worsen existing flooding, exceed the capacity of downstream drainage infrastructure, or create disproportionate impacts on surrounding properties and communities.

Location: Countywide, with emphasis on the Knobbs Creek watershed

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: NC Emergency Management, NCDOT, NCDEQ, Albemarle Commission, Engineering Consultants; Albemarle Resource Conservation and Development Council (ARCD)

Supporting Function:
Stormwater Management; Infrastructure Planning

Existing Funding: Local Planning Funds

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☒ FEMA BRIC / FMA | ☐ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☒ Land & Water Fund | ☒ Section 205(j) |

Scoping Questions:

- Where are the most significant drainage constraints?
- What projects would provide the greatest flood reduction benefits?
- How may future precipitation patterns affect flood conditions?

Estimated Cost:



Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: High benefit as it helps improve understanding of flood risks, identifies high-priority mitigation projects, and supports future grant applications.

Estimated Timeline:



Priority Rating:



Action 1.4: Establish a Salinity Monitoring and Early Warning Gauge Network

Action Description: Establish a salinity monitoring and early warning gauge network to assess and address saltwater intrusion risks affecting groundwater, surface water, agricultural lands, drainage systems, wetlands, and other vulnerable natural resources. This action should identify priority monitoring locations in low-lying coastal and estuarine areas, install or coordinate access to salinity and water level gauges, and pair monitoring data with rainfall, tide, groundwater, and flood information where feasible. The network should support early identification of increasing salinity trends, help inform agricultural and water resource management decisions, and provide data for future modeling, adaptation planning, and resilience project development. Findings should be shared with County staff, partner agencies, agricultural producers, and residents through clear reporting, dashboards, or other public-facing communication tools.

Location: Countywide, with emphasis on low-lying coastal areas, agricultural lands, drainage canals, tidal creeks, groundwater-dependent areas, wetlands, and vulnerable surface water resources.

Source: Action Development Workshop

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer; Pasquotank County Drainage Committee

Potential Partners: Albemarle Resource Conservation and Development Council (ARCD); NC Department of Environmental Quality, NC Division of Water Resources, NC Division of Coastal Management, NC Cooperative Extension, Soil and Water Conservation District,

Supporting Function: Water Resource Monitoring; Agricultural Resilience; Natural Resource Protection; Watershed Management; Flood Risk Assessment; Resilience Planning

Existing Funding: Staff time; local planning resources; existing water resource, drainage, agricultural, and resilience planning efforts.

Hazards Addressed:

- ☒ Coastal Flooding
- ☐ Stormwater Flooding
- ☐ Shoreline Erosion
- ☒ Saltwater Intrusion
- ☒ Other: Drought, Water Quality

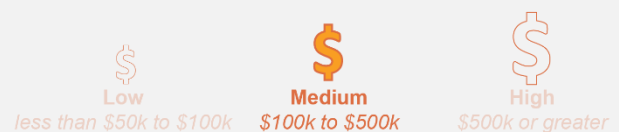
Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☒ FEMA BRIC / FMA | ☒ SARE Program |
| ☒ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☐ Land & Water Fund | ☒ Section 205(j) |

Scoping Questions:

- Where is saltwater intrusion occurring or most likely to emerge based on elevation, drainage, tidal influence, and agricultural impacts?
- What salinity, groundwater, surface water, and tide monitoring locations would provide the most useful early warning information?
- How should monitoring data be shared with County staff, agricultural producers, partner agencies, and the public?

Estimated Cost:



Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☒ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Provides timely data to identify saltwater intrusion trends, protect agricultural productivity and water resources, inform adaptation decisions, support future modeling and grant applications, improve coordination with technical partners, and strengthen long-term resilience to sea level rise, drought, and changing coastal water conditions.

Estimated Timeline:



Priority Rating:



Objective 2: Enhance Stormwater, Drainage, and Transportation Infrastructure

This objective advances efforts to improve Pasquotank County's stormwater, drainage, and supporting transportation infrastructure systems to reduce flood impacts, maintain critical access, improve asset redundancy, and strengthen long-term community resilience. As intensifying rainfall events, aging infrastructure, changing watershed conditions, and recurrent roadway flooding place increasing strain on public infrastructure networks, strategic investments are needed to address vulnerabilities and improve system performance. This objective focuses on understanding the condition and capacity of critical infrastructure assets, identifying network bottlenecks and access constraints, implementing targeted improvements, and establishing a long-term framework for resilient infrastructure management.

Actions under this objective include conducting a comprehensive assessment of county-maintained ditches, swales, culverts, drainage channels, and related infrastructure; implementing priority maintenance and capital improvements to address recurring flooding and drainage deficiencies; evaluating vulnerable orphan roads, privately maintained roadways, and critical access routes that experience frequent flooding or isolation risks; and developing a comprehensive stormwater and infrastructure management program that integrates maintenance, capital investments, watershed planning, transportation connectivity, and future resilience initiatives.

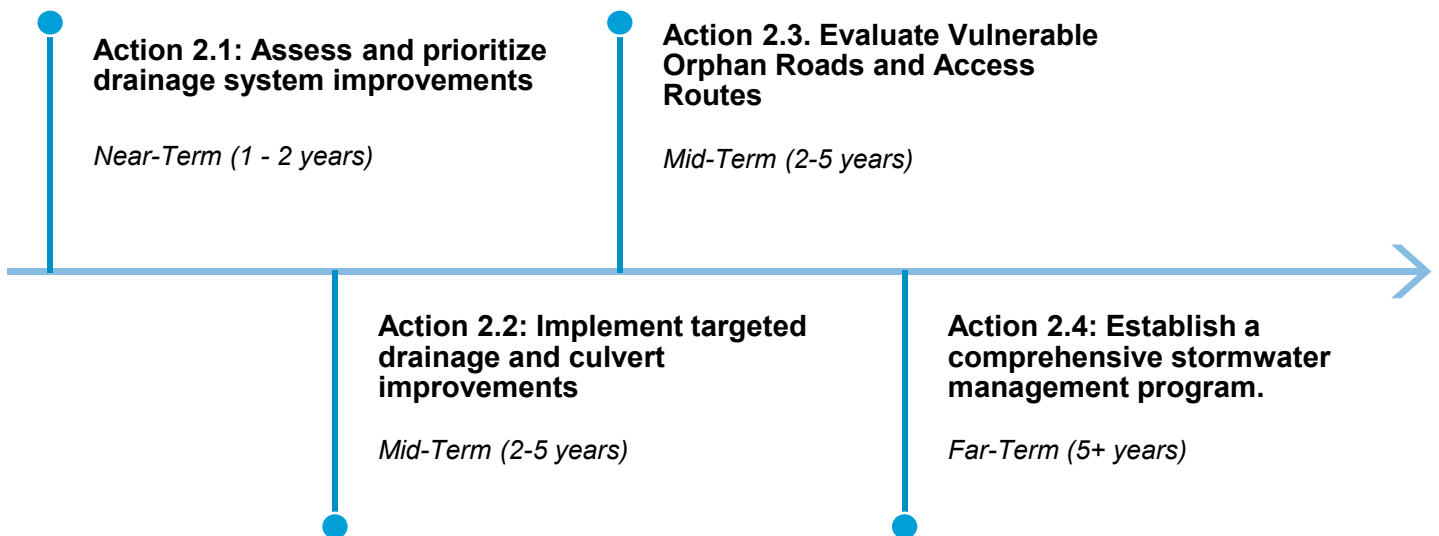


Figure 16. Drainage channel, Weston & Sampson

Action 2.1: Assess and prioritize drainage system improvements

Action Description: Conduct a countywide assessment of drainage infrastructure, including county-maintained ditches, swales, culverts, and channelized waterways, to identify maintenance needs, hydraulic constraints, recurring flooding issues, and priority improvement areas. Develop a prioritized inventory of deficiencies to guide future maintenance and capital investments.

Location: Countywide, with emphasis on known flood-prone areas and drainage corridors

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: NCDEQ, NCDOT, Albemarle Commission, Engineering Consultants

Supporting Function:
Stormwater Management; Infrastructure Planning

Existing Funding: N/A

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☒ FEMA BRIC / FMA | ☐ SARE Program |
| ☒ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☐ Land & Water Fund | ☒ Section 205(j) |

Scoping Questions:

- Which drainage assets are contributing to recurring flooding?
- Where are capacity constraints or maintenance issues occurring?
- Which assets should be prioritized for improvement?

Estimated Cost:

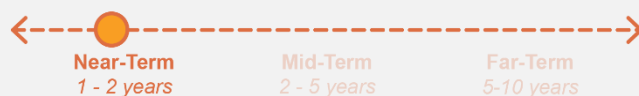


Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Provides a comprehensive understanding of drainage system conditions and establishes priorities for future mitigation investments.

Estimated Timeline:



Priority Rating:



Action 2.2: Implement targeted drainage and culvert improvements

Action Description: Repair, upgrade, and maintain priority drainage infrastructure identified through the assessment process, including culvert replacements, ditch and swale restoration, channel stabilization, and localized drainage improvements to reduce flooding impacts. Where feasible, prioritize nature-based solutions such as bioswales, floodplain reconnection, vegetated channels, stormwater wetlands, and other green infrastructure practices that enhance drainage performance while providing environmental and water quality benefits. Traditional gray infrastructure improvements should be paired with nature-based approaches whenever practical to improve long-term resilience and reduce maintenance needs.

Location: Priority flood-prone areas identified through county assessment efforts

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: NCDEQ, NCDOT, Albemarle Commission, Engineering Consultants

Supporting Function:
Stormwater Management; Infrastructure Planning

Existing Funding: N/A

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Potential Funding Sources:

- ☒ NC RCCP
- ☒ FEMA BRIC / FMA
- ☒ SWIA Loan / Grant
- ☒ Land & Water Fund
- ☐ NCRF
- ☐ SARE Program
- ☐ Sea Grant Office
- ☒ Section 205(j)

Scoping Questions:

- Which improvements will provide the greatest flood reduction benefit?
- What drainage assets are most critical to protect roads, homes, and public infrastructure?

Estimated Cost:



Type of Solution:

- ☐ Study or Planning Effort
- ☐ Policy or Regulation
- ☒ Infrastructure Improvements
- ☒ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Provides a comprehensive understanding of drainage system conditions and establishes priorities for future mitigation investments.

Estimated Timeline:



Priority Rating:



Action 2.3: Evaluate Vulnerable Orphan Roads and Access Routes

Action Description: Evaluate orphan roads, privately maintained roads, and critical access routes that experience recurring flooding, poor drainage, or limited emergency access. This action should identify vulnerable road segments, document ownership and maintenance responsibility, assess drainage and roadway condition, and determine where upgrades are needed to improve reliability, safety, and long-term resilience. The evaluation should consider opportunities to bring priority roads up to NCDOT standards, improve drainage crossings or roadside conveyance, coordinate with property owners or homeowners associations, and pursue transfer of ownership or maintenance responsibility where feasible. Results should support a prioritized list of access route improvements that protect residents, emergency responders, agricultural operations, and public services during flood events.

Location: Countywide, with emphasis on orphan or privately maintained roads, flood-prone access routes, low-lying road segments, rural roads serving homes or farms, emergency access routes, and areas identified through resident reports, NCDOT coordination, or the vulnerability assessment.

Source: Vulnerability Assessment; Public Survey; Action Development Workshop

Supporting Function: Transportation Resilience; Emergency Access; Infrastructure Planning; Flood Risk Reduction; Capital Improvement Planning; Community Connectivity

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Scoping Questions:

- Which orphan, private, or locally maintained roads experience recurring flooding or access disruptions?
- What ownership, maintenance, design, drainage, or legal barriers must be addressed before improvements can occur?
- Which access routes are most important for emergency response, evacuation, agricultural operations, or daily resident mobility?

Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☒ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement

Estimated Timeline:



Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer; Emergency Management

Potential Partners: NCDOT, Albemarle Commission, NC Emergency Management, NCDEQ, Soil and Water Conservation District, engineering consultants, surveyors, legal counsel, property owners, homeowners associations, agricultural producers, emergency service providers, and community organizations.

Existing Funding: Staff time; local planning and GIS resources; existing transportation and drainage coordination efforts.

Potential Funding Sources:

- | | |
|---|---|
| ☐ NC RCCP | ☐ NCRF |
| ☒ FEMA BRIC / FMA | ☐ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☐ Land & Water Fund | ☐ Section 205(j) |

Estimated Cost:



Anticipated Benefit: Improves understanding of vulnerable access routes, supports emergency response and evacuation planning, identifies feasible pathways for road upgrades or ownership transfer, reduces isolation during flood events, improves connectivity for residents and agricultural operations, and helps prioritize transportation resilience investments.

Priority Rating:



Action 2.4: Establish a comprehensive stormwater management program.

Action Description: Develop a long-term stormwater management program that integrates routine maintenance, capital improvement planning, watershed management, drainage infrastructure upgrades, and resilience initiatives to address current and future flood risks countywide. As part of this program, evaluate the creation of a stormwater utility or dedicated stormwater fee to provide a sustainable local funding source for drainage maintenance, culvert and ditch improvements, capital projects, watershed planning, and long-term program administration. Utilize the County's existing Drainage Committee as the primary coordination mechanism for identifying and prioritizing drainage projects, reviewing recurring flooding concerns, coordinating maintenance activities, evaluating development and watershed impacts on drainage infrastructure, and recommending capital improvements.

Location: Countywide

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer; Pasquotank County Drainage Advisory Committee

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: NCDEQ, NCDOT, Albemarle Commission, Engineering Consultants

Supporting Function:
Stormwater Management; Planning & Regulation

Existing Funding: Local Operating Funds; Capital Improvement Plan; existing drainage coordination resources; potential future stormwater utility revenue if established.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☒ FEMA BRIC / FMA | ☐ SARE Program |
| ☒ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☐ Land & Water Fund | ☒ Section 205(j) |

Scoping Questions:

- Can the County sustainably maintain drainage infrastructure with current staff, or would hiring be necessary?
- What funding mechanisms, including a stormwater utility or dedicated stormwater fee, are needed to support long-term drainage maintenance and capital improvements?
- How should future development and watershed management be incorporated into stormwater planning?

Estimated Cost:



Type of Solution:

- ☒ Study or Planning Effort
- ☒ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Creates a sustainable framework for managing flood risk, maintaining drainage infrastructure, funding priority drainage improvements, and coordinating future resilience investments across the County. A stormwater utility or dedicated fee could provide a reliable local revenue source to support routine maintenance, capital improvements, and grant matching requirements.

Estimated Timeline:



Priority Rating:



Objective 3: Expand Nature-Based Solutions and Flood Mitigation

This objective seeks to protect and enhance Pasquotank County's natural systems to reduce flood risk, improve water quality, and strengthen long-term community resilience. Nature-based solutions (NBS) can help manage stormwater, reduce erosion, increase flood storage capacity, and provide environmental and community benefits. Additionally, these solutions are a key component of the RCCP. As development pressures, changing precipitation patterns, and sea level rise continue to affect the County, preserving and restoring natural landscapes will be critical to protect for ecosystem health.

Actions under this objective focus on expanding the use of nature-based solutions across public and private lands, restoring natural shoreline and aquatic systems, and increasing the County's capacity to store and manage floodwaters through ecosystem restoration. These efforts include promoting nature-based solutions such as rain gardens, vegetated swales, and tree planting; implementing living shoreline and ecosystem restoration projects that reduce erosion and flooding while improving habitat conditions; and restoring watershed and other natural flood storage areas to provide long-term flood mitigation and ecological benefits.

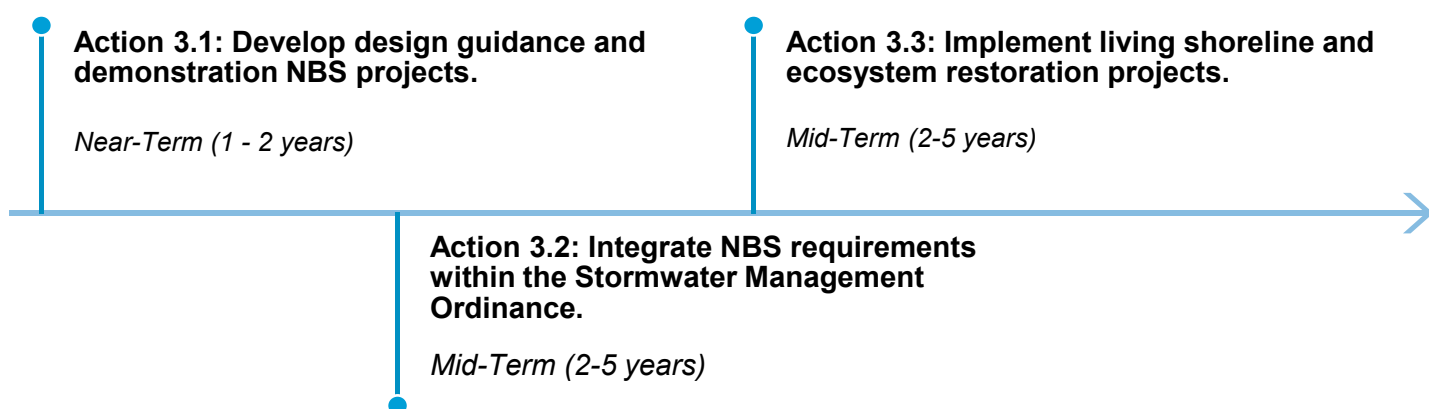


Figure 17. Kayaks on Symonds Creek, Bill Kruse

Action 3.1: Develop design guidance and demonstration NBS projects.

Action Description: Develop countywide design guidance for nature-based stormwater management practices and implement pilot projects that demonstrate their effectiveness in reducing flooding, improving water quality, and enhancing community resilience. The County will create user-friendly guidance for public agencies, developers, businesses, and property owners on practices such as rain gardens, bioswales, tree planting, permeable surfaces, and other green infrastructure techniques. A pilot project may be installed at highly visible public sites to showcase implementation approaches, costs, maintenance needs, and resilience benefits. Community outreach and education efforts will accompany these projects to increase public awareness, encourage adoption on private properties, and build local support for nature-based flood mitigation strategies.

Location: Countywide, with emphasis on known flood-prone areas and drainage corridors

Source: Vulnerability Assessment; Action Development Workshop

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer

Potential Partners: Green Saves Green; Albemarle Commission, NC DCM, NC DEQ, NC Cooperative Extension, Elizabeth City, Elizabeth City State University, Soil and Water Conservation District, local nonprofits, community organizations, property owners, developers, and schools.

Supporting Function:
Stormwater Management; Infrastructure Planning

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion
- ☒ Other: Extreme Heat

Existing Funding: Staff time; local stormwater budget; ongoing environmental and watershed programs.

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☒ NCRF |
| ☐ FEMA BRIC / FMA | ☐ SARE Program |
| ☐ SWIA Loan / Grant | ☒ Sea Grant Office |
| ☒ Land & Water Fund | ☐ Section 205(j) |

Scoping Questions:

- Where can nature-based solutions provide the greatest flood reduction and water quality benefits?
- Which public properties are suitable for demonstration projects?
- How can public education and outreach increase adoption of nature-based practices?

Estimated Cost:

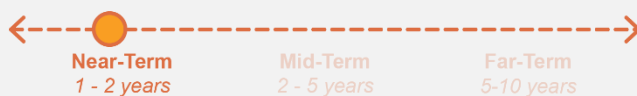


Type of Solution:

- ☐ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☒ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☒ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Demonstrates effective flood mitigation approaches, reduces stormwater runoff and localized flooding, improves water quality, enhances ecosystem health, increases community awareness and participation, supports climate adaptation goals, and creates a framework for broader adoption of nature-based solutions across Pasquotank County.

Estimated Timeline:



Priority Rating:



Action 3.2: Integrate NBS requirements within the Stormwater Management Ordinance

Action Description: Update the County's stormwater management ordinance and development review standards to require or incentivize nature-based stormwater practices for new development, redevelopment, and major site improvements. Updates should clarify design, maintenance, crediting, and flexibility standards for practices such as bioretention, vegetated swales, stormwater wetlands, permeable surfaces, conservation design, and riparian, wetland, shoreline, or drainageway buffers. The ordinance should also address tree protection, including preservation of mature trees, construction protection measures, and canopy retention or replacement standards. Revisions should account for future climate conditions, including changing precipitation patterns, sea level rise, tidal influence, and future flood risk, while supporting flood mitigation, water quality protection, low-impact development, buffer preservation, and long-term resilience.

Location: Countywide, with emphasis on new development, redevelopment, growth areas, flood-prone areas, drainage-constrained sites, waterfront areas, and locations where stormwater runoff affects downstream flooding or water quality.

Source: Action Development Workshop

Supporting Function:

Stormwater Management; Planning and Regulation; Water Quality Protection; Flood Risk Reduction; Nature-Based Solutions; Development Review

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion
- ☒ Other: Extreme Heat

Scoping Questions:

- What existing stormwater ordinance provisions can be revised to require or incentivize nature-based solutions?
- Which types of development or redevelopment should be subject to enhanced nature-based stormwater requirements?
- What design, maintenance, crediting, and inspection standards are needed to ensure long-term performance?

Type of Solution:

- ☐ Study or Planning Effort
- ☒ Policy or Regulation
- ☐ Infrastructure Improvements
- ☒ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement

Estimated Timeline:



Responsible Entity: Pasquotank County Planning Department

Potential Partners: County Stormwater Engineer; Albemarle Commission, NC Division of Coastal Management, NC Department of Environmental Quality

Existing Funding: Staff time; local planning and ordinance administration resources; existing stormwater and development review processes.

Potential Funding Sources:

- | | |
|---|---|
| ☒ NC RCCP | ☐ NCRF |
| ☐ FEMA BRIC / FMA | ☐ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☐ Land & Water Fund | ☐ Section 205(j) |

Estimated Cost:



Anticipated Benefit: Creates a regulatory pathway for broader use of nature-based stormwater practices, reduces future runoff and localized flooding, improves water quality, protects natural drainage and flood storage functions, provides clearer expectations for developers and property owners, and embeds resilience into routine development review and long-term stormwater management.

Priority Rating:



Action 3.3: Implement living shoreline and ecosystem restoration projects.

Action Description: Implement living shoreline and ecosystem restoration projects in vulnerable coastal and estuarine areas to reduce erosion, mitigate flooding, and enhance the ecological health of Pasquotank County's waterways. The County will identify priority shoreline segments and natural areas where restoration can provide resilience benefits and develop pilot projects that demonstrate the effectiveness of nature-based approaches. Projects may include living shorelines, marsh enhancement, riparian buffer restoration, oyster reef installation, and other habitat-based techniques that stabilize shorelines while preserving natural processes. Community engagement and educational initiatives will be incorporated to increase awareness of ecosystem-based resilience strategies, encourage participation from waterfront property owners, and build support for broader implementation throughout the County. Outreach efforts should also emphasize the role of private property owners in maintaining drainage features on their property, where applicable, to support effective stormwater management and reduce localized flooding impacts.

Location: Countywide, with emphasis on priority shoreline areas and ecosystems

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer; Pasquotank County Parks and Recreation

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: NC Division of Coastal Management, NC Department of Environmental Quality, Albemarle Commission, NC Wildlife Resources Commission, NOAA, U.S. Fish and Wildlife Service, Soil and Water Conservation District

Supporting Function:
Stormwater Management; Water Quality Improvements

Existing Funding: Staff time; local stormwater budget; ongoing environmental and watershed programs.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☒ Shoreline Erosion
- ☐ Saltwater Intrusion
- ☒ Other: Water Quality

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☒ NCRF |
| ☐ FEMA BRIC / FMA | ☐ SARE Program |
| ☒ SWIA Loan / Grant | ☒ Sea Grant Office |
| ☒ Land & Water Fund | ☒ Section 205(j) |

Scoping Questions:

- Which shoreline segments experience the greatest erosion and flood-related impacts?
- Where can living shorelines provide measurable resilience and ecological benefits?
- Which public and private landowners could participate?

Estimated Cost:



Type of Solution:

- ☐ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☒ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☒ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Reduces shoreline erosion and flood risk, enhances natural buffers against storms and sea level rise, improves water quality and habitat conditions, strengthens ecosystem health, supports fisheries and wildlife resources, increases community awareness of nature-based resilience strategies, and provides long-term adaptation benefits for coastal and waterfront areas.

Estimated Timeline:



Priority Rating:



Objective 4: Protect Natural Resources and Water Quality

This objective builds land and natural resource conservation efforts to enhance Pasquotank County's natural systems. These natural resources reduce flood risk, improve water quality, and strengthen long-term community resilience. As development pressures, changing precipitation patterns, and sea level rise continue to affect the County, preserving and restoring natural landscapes will be critical to protect for ecosystem health.

Wetlands, floodplains, riparian corridors, waterways, and natural drainage features should be recognized as critical natural infrastructure that provides flood storage, stormwater management, water-quality protection, habitat, and long-term community resilience. County policies and development standards should prioritize avoiding unnecessary impacts on these resources and maintaining their natural functions whenever reasonably practicable.

Actions under this objective focus on natural resource conservation across public and private lands, restoring natural shoreline and aquatic systems, and increasing the County's capacity to store and manage floodwaters through ecosystem restoration. These efforts include ecosystem restoration projects that reduce erosion and flooding while improving habitat conditions; and restoring wetlands and other natural flood storage areas to provide long-term flood mitigation and ecological benefits.

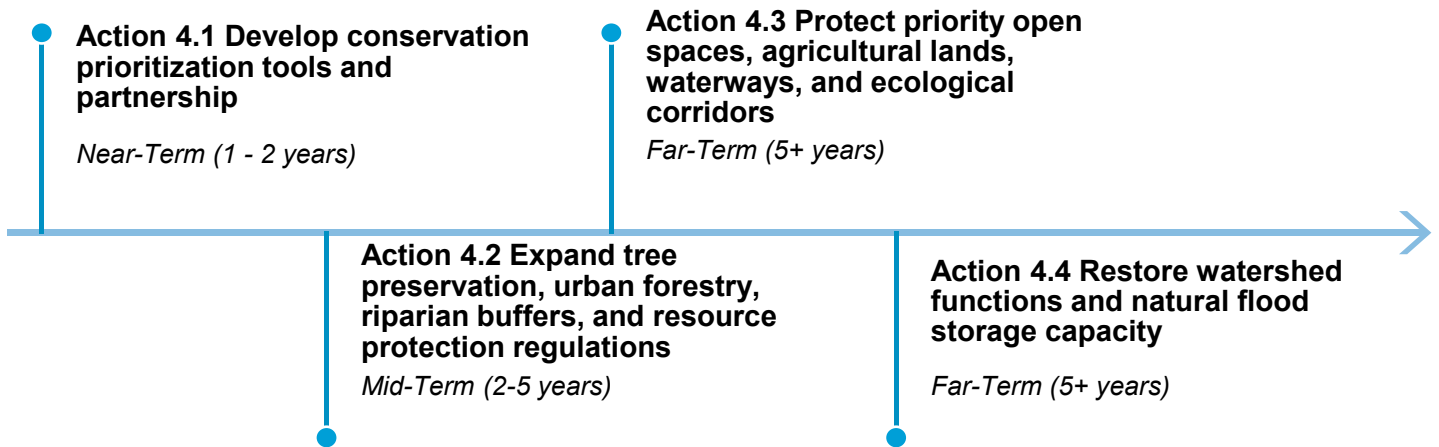


Figure 18. Great Dismal Swamp, Weston & Sampson

Action 4.1: Develop Conservation Prioritization Tools and Partnerships

Action Description: Develop tools and partnership frameworks to identify, evaluate, and prioritize lands that provide flood mitigation, water quality, habitat, agricultural, cultural, and community resilience benefits. This action will support a more strategic approach to conservation by mapping priority open spaces, wetlands, floodplains, agricultural lands, waterways, ecological corridors, and areas vulnerable to future development or hazard impacts. The County will strengthen partnerships through regular committee meetings with land trusts, conservation organizations, state agencies, and local landowners to support voluntary conservation, restoration, and land protection opportunities. These tools can help guide future investments, support grant applications, and align conservation efforts with watershed resilience, flood mitigation, and long-term growth management goals.

Location: Countywide, with emphasis on floodplains and agricultural lands

Responsible Entity: Pasquotank County Planning Department

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: Albemarle Commission, NC DCM, NC DEQ, NC Cooperative Extension, Elizabeth City, Elizabeth City State University, Soil and Water Conservation District

Supporting Function:
Natural Resource Protection; Watershed Management

Existing Funding: Staff time; local planning and GIS resources; existing conservation, watershed, and land use planning efforts.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☒ Saltwater Intrusion
- ☒ Other: Water Quality

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☐ FEMA BRIC / FMA | ☒ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☒ Land & Water Fund | ☐ Section 205(j) |

Scoping Questions:

- Which lands provide the greatest flood mitigation, water quality, habitat, and resilience benefits?
- What datasets should be used to identify priority conservation areas?
- Where do conservation priorities overlap with future growth, infrastructure, or hazard exposure?
- How will the County convene different land owners or stakeholders?

Estimated Cost:

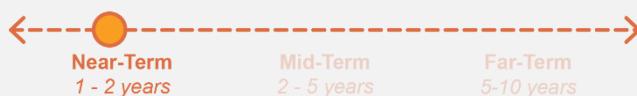


Type of Solution:

- ☒ Study or Planning Effort
- ☒ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Improves the County's ability to target conservation investments, protect high-value natural areas, reduce flood risk, strengthen grant competitiveness, support watershed resilience, and preserve lands that provide long-term environmental and community benefits.

Estimated Timeline:



Priority Rating:



Action 4.2: Expand Tree Preservation, Urban Forestry, Riparian Buffers, and Resource Protection Regulations

Action Description: Expand and strengthen policies, programs, and regulatory tools that protect tree canopy, riparian buffers, wetlands, waterways, and other sensitive natural resources. This action may include updating development standards, strengthening tree preservation requirements, promoting urban forestry practices, expanding riparian buffer protections, and incorporating resource protection measures into zoning, subdivision, stormwater, and site design review processes. These efforts will help reduce stormwater runoff, stabilize streambanks and shorelines, improve water quality, reduce heat impacts, and preserve ecosystem functions as the County grows.

Location: Countywide, with emphasis on growth areas, riparian corridors, floodplains, and wetlands

Responsible Entity: Pasquotank County Planning Department; Pasquotank County Parks and Recreation Department

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: Albemarle Commission, NC Forest Service; NC DCM, NC DEQ, NC Cooperative Extension, Elizabeth City, Elizabeth City State University, Soil and Water Conservation District, local nonprofits, community organizations, property owners, developers, and schools.

Supporting Function:
Natural Resource Protection; Watershed Management

Existing Funding: Staff time; local planning and GIS resources; existing conservation, watershed, and land use planning efforts.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☒ Shoreline Erosion
- ☒ Saltwater Intrusion
- ☒ Other: Extreme Heat; Water Quality

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☐ FEMA BRIC / FMA | ☒ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☒ Land & Water Fund | ☒ Section 205(j) |

Scoping Questions:

- What existing ordinances or policies address tree preservation, buffers, and natural resource protection?
- Where are current regulations insufficient to protect flood storage, water quality, and habitat functions?
- What buffer widths, tree preservation standards, or mitigation requirements should be considered?

Estimated Cost:



Type of Solution:

- ☐ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☒ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Improves the County's ability to target conservation investments, protect high-value natural areas, reduce flood risk, strengthen grant competitiveness, support watershed resilience, and preserve lands that provide long-term environmental and community benefits.

Estimated Timeline:



Priority Rating:



Action 4.3: Protect Priority Open Spaces, Agricultural Lands, Waterways, and Ecological Corridors

Action Description: Protect priority open spaces, agricultural lands, waterways, wetlands, floodplains, and ecological corridors through long-term conservation initiatives that support flood mitigation, watershed health, habitat connectivity, and rural land preservation. This action will focus on voluntary land protection strategies such as conservation easements, landowner assistance, acquisition of high-priority parcels, agricultural preservation tools, and partnerships with land trusts and conservation organizations. The County should also consider the role of heirs' property and unclear ownership in limiting access to conservation, resilience, and land management programs. By connecting landowners with technical assistance, estate planning resources, legal support, and voluntary conservation opportunities, the County can help reduce barriers to participation while protecting lands that provide important community and environmental benefits.

Location: Countywide, with emphasis on floodplains and agricultural lands

Source: Vulnerability Assessment; Action Development Workshop

Supporting Function:
Natural Resource Protection; Watershed Management

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☒ Shoreline Erosion
- ☒ Saltwater Intrusion

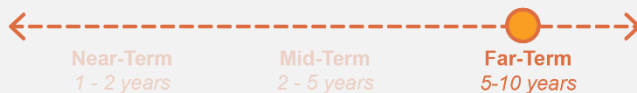
Scoping Questions:

- Which tools do property owners need?
- How might the County prioritize acquisition?

Type of Solution:

- ☐ Study or Planning Effort
- ☒ Policy or Regulation
- ☐ Infrastructure Improvements
- ☒ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Estimated Timeline:



Responsible Entity: Pasquotank County Planning Department

Potential Partners: Albemarle Commission, NC DCM, NC DEQ, NC Cooperative Extension, Elizabeth City, Elizabeth City State University, Soil and Water Conservation District, local nonprofits, community organizations, property owners, developers, and schools.

Existing Funding: Staff time; local planning and GIS resources; existing conservation, watershed, and land use planning efforts.

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☐ FEMA BRIC / FMA | ☒ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☒ Land & Water Fund | ☐ Section 205(j) |

Estimated Cost:



Anticipated Benefit: Improves the County's ability to target conservation investments, protect high-value natural areas, reduce flood risk, strengthen grant competitiveness, support watershed resilience, and preserve lands that provide long-term environmental and community benefits.

Priority Rating:



Action 4.4: Restore watershed functions and natural flood storage capacity

Action Description: Identify, protect, and restore wetlands, floodplain areas, and other natural flood storage features to reduce flood risks, enhance water quality, and strengthen ecosystem resilience throughout Pasquotank County. The County will work with public and private partners to prioritize areas where wetland restoration, floodplain reconnection, and land conservation can provide significant flood mitigation and environmental benefits. Restoration efforts may include reestablishing natural hydrology, removing barriers to water storage, reconnecting streams to floodplains, and preserving undeveloped lands that serve as natural flood buffers. Public outreach and landowner engagement will be incorporated to increase awareness of the benefits of wetland restoration and encourage voluntary participation in conservation and restoration programs. Over time, these efforts will increase the County's capacity to absorb and store floodwaters, reduce downstream flooding, and support healthy natural ecosystems.

Location: Countywide, with a focus on priority watersheds and floodplains.

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer; Pasquotank County Parks and Recreation

Source: Vulnerability Assessment; Action Development Workshop

Potential Partners: Albemarle Commission; NC Division of Coastal Management; NC Department of Environmental Quality; NC Wildlife Resources Commission; Soil and Water Conservation District; USDA Natural Resources Conservation Service (NRCS); U.S. Fish and Wildlife Service; NOAA; nonprofit conservation organizations; land trusts; agricultural producers; private landowners; Elizabeth City State University.

Supporting Function:
Stormwater Management; Water Quality Improvements

Existing Funding: Local environmental and stormwater programs; conservation initiatives; staff resources; existing watershed restoration and water quality programs.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☒ Shoreline Erosion
- ☐ Saltwater Intrusion

Potential Funding Sources:

- | | |
|---|--|
| ☐ NC RCCP | ☒ NCRF |
| ☐ FEMA BRIC / FMA | ☐ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☒ Land & Water Fund | ☒ Section 205(j) |

Scoping Questions:

- Where can wetland and floodplain restoration provide the greatest flood mitigation benefits?
- What land conservation or easement opportunities exist within priority watersheds?
- What public and private partnerships can support project implementation?

Estimated Cost:



Type of Solution:

- ☐ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☒ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☐ Other: _____

Anticipated Benefit: Increases watershed storage capacity and reduces downstream flooding; restores natural hydrology and ecosystem functions; improves water quality; enhances wetland, stream, and wildlife habitat; supports climate adaptation and sea level rise resilience; protects critical natural resources; and provides long-term flood mitigation, environmental, and community resilience benefits throughout Pasquotank County.

Estimated Timeline:



Priority Rating:



Objective 5: Guide Resilient Growth and Land Use

This objective supports long-term community resilience by aligning land use decisions, conservation priorities, and development patterns with current and future flood risks. As Pasquotank County continues to grow, thoughtful planning will be essential to protect people, property, natural resources, and infrastructure while maintaining opportunities for economic development. Integrating hazard mitigation and resilience considerations into land use planning can help reduce future exposure to flooding, protect critical watershed functions, and promote more sustainable growth.

The County evaluate the cumulative impacts of existing and anticipated growth and development within shared watersheds and drainage basins. Evaluation should consider the combined effects of multiple developments, increases in impervious surfaces, alterations to natural drainage patterns, loss of flood-storage capacity, increased stormwater runoff, and additional demands placed on shared drainage infrastructure. Findings should be incorporated into watershed planning, drainage improvement prioritization, and future land use and development decisions. For major new development, the County should evaluate whether essential infrastructure and public services—including drainage, stormwater management, transportation, wastewater capacity, and emergency access—can reasonably support the proposed development without creating unacceptable risks or disproportionate future costs for existing residents and taxpayers.

Actions under this objective focus on strengthening the County's planning and regulatory framework to better manage development in vulnerable areas while balancing conservation and economic objectives. These efforts include evaluating planning strategies that support watershed protection and resilience, updating land use policies and development regulations to discourage growth in flood-prone areas, and aligning future growth patterns and development intensity with long-term resilience goals.

● **Action 5.1 Assess septic vulnerabilities and guide resilient development**

Near-Term (1 - 2 years)

Action 5.2 Update development policies to reduce future flood risk

Mid-Term (2-5 years)



Figure 19. Roadway in Pasquotank County, Weston & Sampson

Action 5.1: Assess septic vulnerabilities and guide resilient development

Action Description: Assess septic system vulnerabilities and use the findings to guide resilient development, redevelopment, and infrastructure decisions in areas with high flood exposure, poor drainage, shallow groundwater, sea level rise risk, or soil limitations. This action should identify where septic systems are most likely to fail or become compromised during flooding, heavy rainfall, tidal influence, or long-term groundwater changes. The assessment should consider septic locations, soil suitability, groundwater conditions, flood and sea level rise exposure, age or condition of systems where available, proximity to waterways, public health concerns, and opportunities for alternative wastewater solutions. Results should inform land use decisions, development review, public education, grant applications, and future policies that reduce wastewater-related health, water quality, and resilience risks.

Findings from the septic vulnerability assessment should be incorporated into development review and long-term land use planning to avoid concentrating additional septic-dependent development in areas where soil limitations, shallow groundwater, flooding, tidal influence, or future environmental conditions create an elevated risk of system failure or water-quality impacts.

Location: Countywide, with emphasis on flood-prone neighborhoods, waterfront and low-lying areas, rural areas reliant on septic systems, areas with shallow groundwater or poorly drained soils.

Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer

Source: Vulnerability Assessment; Public Survey; Action Development Workshop

Potential Partners: Albemarle Commission, NC Department of Health and Human Services, NC Department of Environmental Quality, NC Division of Water Resources, NC Division of Coastal Management, Soil and Water Conservation District, NC Cooperative Extension

Supporting Function: Wastewater Resilience; Land Use Planning; Public Health Protection; Water Quality Protection; Flood Risk Reduction; Development Review

Existing Funding: Staff time; local planning and environmental health resources; existing development review, septic permitting, and watershed planning efforts.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☒ Saltwater Intrusion

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☒ FEMA BRIC / FMA | ☐ SARE Program |
| ☒ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☐ Land & Water Fund | ☒ Section 205(j) |

Scoping Questions:

- Where are septic systems most vulnerable to flooding, shallow groundwater, poor soils, sea level rise, or saltwater intrusion?
- Which areas may require alternative wastewater solutions, system upgrades, or additional development review considerations?

Estimated Cost:



Type of Solution:

- ☒ Study or Planning Effort
- ☒ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement

Anticipated Benefit: Helps identify areas where septic systems may be vulnerable to flooding, groundwater changes, or sea level rise; supports safer and more resilient development decisions; protects water quality and public health; informs future wastewater infrastructure or retrofit needs; and strengthens grant readiness for septic resilience or alternative wastewater projects.

Estimated Timeline:



Priority Rating:



Action 5.2: Update development policies to reduce future flood risk

Action Description: Update land use policies, development standards, and regulatory tools to reduce future flood risk and discourage new growth in areas with high exposure to flooding, stormwater constraints, sea level rise, or limited drainage capacity. This action may include revising zoning and subdivision standards, strengthening floodplain development requirements, incorporating higher freeboard or elevation standards, requiring open space or conservation design in vulnerable areas, limiting development intensity in high-risk locations, and encouraging low-impact development practices. Policy updates should also incorporate the results of the vulnerability assessment, future flood risk information, watershed and drainage considerations, and community priorities identified through the RCCP process. Incorporate any associated updates to FEMA FIRMs into development policies.

The County should evaluate and update, as appropriate, zoning, subdivision, stormwater, and development review standards to ensure that future growth does not unnecessarily increase flood exposure, reduce natural flood-storage capacity, overload drainage systems, or create avoidable long-term public infrastructure costs. Development decisions should incorporate current and future flood risk, watershed conditions, drainage capacity, vulnerability assessment findings, natural-resource functions, and community priorities.

Location: Countywide, with emphasis on floodplains, low-lying growth areas, waterfront areas, drainage-constrained locations, and areas where future development may increase flood exposure.

Source: Vulnerability Assessment; Existing Plans and Efforts Review

Supporting Function: Planning and Regulation; Floodplain Management; Stormwater Management; Growth Management; Natural Resource Protection

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Scoping Questions:

- Which development standards currently allow or incentivize growth in flood-prone or drainage-constrained areas?
How should future flood conditions, sea level rise, stormwater capacity, and vulnerability assessment results be incorporated into development review standards?

Type of Solution:

- ☒ Study or Planning Effort
- ☒ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement

Estimated Timeline:



Responsible Entity: Pasquotank County Planning Department; Planning Board; Board of Commissioners

Potential Partners: Albemarle Commission, NC Division of Coastal Management, NC Emergency Management, NC Department of Environmental Quality, NCDOT, Soil and Water Conservation District, NC Cooperative Extension.

Existing Funding: Staff time; local planning funds; ongoing ordinance administration and development review processes.

Potential Funding Sources:

- ☒ NC RCCP
- ☒ FEMA BRIC / FMA
- ☐ SWIA Loan / Grant
- ☐ Land & Water Fund
- ☐ NCRF
- ☐ SARE Program
- ☐ Sea Grant Office
- ☒ Section 205(j)

Estimated Cost:



Anticipated Benefit: Reduces future development exposure to flooding, strengthens floodplain and stormwater management, lowers long-term public infrastructure and recovery costs, protects natural flood storage areas, and provides clearer expectations for resilient development.

Priority Rating:



Objective 6. Expand Public Access, Education, and Community Capacity

Strengthen community resilience by increasing public awareness of flood risks, improving access to natural resources and waterfront areas, and building local capacity to support long-term stewardship and resilience initiatives. An informed and engaged community is better equipped to prepare for hazards, support resilience investments, and participate in the protection and enhancement of the County's natural and cultural resources. Expanding educational opportunities, recreational access, and dedicated staff capacity can help foster stronger connections between residents and the environment while supporting quality of life and economic development goals.

Actions under this objective focus on enhancing public education, expanding access to natural and waterfront resources, increasing organizational capacity, developing a home assistance program, and promoting stewardship through recreation opportunities and community engagement.

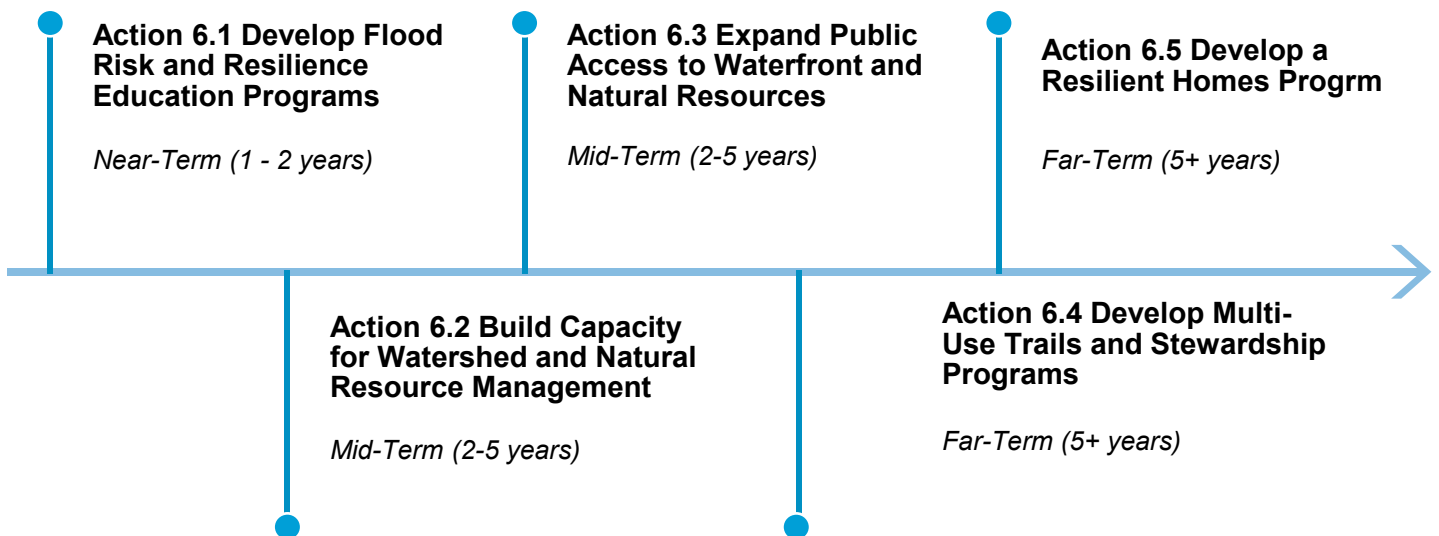


Figure 20. View of the Little River, Bill Kruse

Action 6.1: Develop Flood Risk and Resilience Education Programs

Action Description: Develop flood risk education, stormwater outreach materials, and emergency preparedness programs for residents, property owners, businesses, and community organizations. This action should translate technical findings from the vulnerability assessment into accessible materials that explain local flood hazards, stormwater drainage challenges, sea level rise, saltwater intrusion, emergency preparedness, property-level mitigation options, and available resources. Outreach materials may include fact sheets, web content, public presentations, signage, workshops, social media posts, school or university partnerships, and neighborhood-level guidance. The program should emphasize practical steps residents can take to prepare for flood events, reduce runoff, protect property, maintain drainage features, and support broader community resilience efforts.

Location: Countywide, with emphasis on flood-prone neighborhoods, waterfront areas, rural drainage problem areas, vulnerable populations, schools, community gathering spaces, and areas identified through public engagement or the vulnerability assessment.

Source: Vulnerability Assessment; Action Development Workshop; Public Survey; CAT Input; Existing Plans and Efforts Review

Supporting Function: Public Education; Community Engagement; Emergency Preparedness; Stormwater Management; Flood Risk Communication; Community Capacity Building

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☒ Saltwater Intrusion

Scoping Questions:

- What flood risk and resilience topics are most important for residents, property owners, and businesses to understand?
- Which communication methods will best reach rural residents, waterfront property owners, vulnerable populations, and community organizations?
- How can technical vulnerability assessment results be translated into clear, actionable public-facing materials?

Type of Solution:

- ☐ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☒ Public Outreach and Engagement

Estimated Timeline:



Responsible Entity: Pasquotank County Planning Department; Emergency Management; Stormwater Engineer

Potential Partners: Albemarle Commission, NC Division of Coastal Management, NC Emergency Management, NC Department of Environmental Quality, NC Cooperative Extension, Elizabeth City State University, Soil and Water Conservation District, schools, Green Saves Green.

Existing Funding: Staff time; local outreach and planning resources; existing emergency preparedness and public communication channels.

Potential Funding Sources:

- | | |
|---|--|
| ☒ NC RCCP | ☐ NCRF |
| ☐ FEMA BRIC / FMA | ☐ SARE Program |
| ☐ SWIA Loan / Grant | ☒ Sea Grant Office |
| ☐ Land & Water Fund | ☐ Section 205(j) |

Estimated Cost:



Anticipated Benefit: Improves public understanding of flood risks and resilience options, increases household and property-level preparedness, supports participation in County resilience initiatives, strengthens trust and communication between residents and local government, and helps residents take practical actions to reduce flood impacts and protect community resources.

Priority Rating:



Action 6.2: Build Capacity for Watershed and Natural Resource Management

Action Description: Build local capacity for watershed management, natural resource protection, and long-term resilience implementation by identifying staffing, coordination, technical assistance, and partnership needs. Evaluate opportunities to strengthen the County's ability to lead watershed-scale initiatives, support grant development and administration, pursue restoration and stewardship projects, and integrate natural resource priorities into planning efforts. Capacity-building measures may include assigning staff responsibilities, improving interdepartmental coordination, developing partnerships with universities and nonprofits, pursuing regional technical assistance, securing funding for long-term program management, and coordinating with Elizabeth City on shared resilience, growth, and infrastructure.

Location: Countywide, with emphasis on priority watersheds, floodplains, wetlands, agricultural lands, conservation areas, waterfront areas, and locations identified through the vulnerability assessment and project portfolio.

Source: Vulnerability Assessment; Action Development Workshop; Public Survey; CAT Input; Existing Plans and Efforts Review

Supporting Function: Watershed Management; Natural Resource Protection; Grant Administration; Partnership Development; Community Capacity Building; Resilience Implementation

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Scoping Questions:

- What staffing, technical, and administrative capacity is needed to implement watershed and natural resource resilience projects?
- Which regional organizations, universities, nonprofits, or agencies can provide technical assistance or shared capacity?
- What funding mechanisms can support long-term program coordination, grant administration, and stewardship activities?

Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☐ Public Outreach and Engagement
- ☒ Other: Capacity Building

Estimated Timeline:



Responsible Entity: Pasquotank County Planning Department; Stormwater Engineer; County Administration

Potential Partners: Albemarle Commission, NC Division of Coastal Management, NC Department of Environmental Quality, NC Cooperative Extension, Soil and Water Conservation District, Elizabeth City State University, land trusts, conservation organizations, Green Saves Green, agricultural partners, watershed organizations, and neighboring localities.

Existing Funding: Staff time; local planning resources; existing conservation, watershed, and resilience planning efforts.

Potential Funding Sources:

- ☒ NC RCCP
- ☐ FEMA BRIC / FMA
- ☐ SWIA Loan / Grant
- ☒ Land & Water Fund
- ☐ NCRF
- ☐ SARE Program
- ☐ Sea Grant Office
- ☒ Section 205(j)

Estimated Cost:



Anticipated Benefit: Strengthens the County's ability to implement resilience projects, pursue and administer grants, coordinate watershed-scale initiatives, support conservation and restoration partnerships, and maintain long-term momentum beyond the planning process.

Priority Rating:



Action 6.3: Expand Public Access to Waterfront and Natural Resources

Action Description: Expand access to waterfronts, waterways, parks, trails, and natural areas to support recreation, education, stewardship, and resilience. Identify opportunities to improve access to rivers, creeks, wetlands, conservation lands, and other natural resources through public access points, kayak launches, trails, signage, observation areas, and other low-impact improvements. All projects should incorporate flood-resilient design, nature-based approaches, and environmental protections to enhance public use while preserving sensitive ecosystems.

Location: Countywide, with emphasis on waterfront areas, parks, public lands, conservation areas, waterways, trail corridors, and natural resource areas that are suitable for public access and environmental education.

Source: Public Survey; Workshop Results; Vulnerability Assessment; Existing Plans and Efforts Review; CAT Input

Responsible Entity: Pasquotank County Planning Department; Parks and Recreation; Stormwater Engineer

Potential Partners: Albemarle Commission, Elizabeth City, NC Division of Coastal Management, NC Department of Environmental Quality, NC Wildlife Resources Commission, NC Parks and Recreation, Elizabeth City State University, Green Saves Green, local nonprofits, land trusts, tourism partners, schools, waterfront property owners, and community organizations.

Supporting Function: Public Access; Parks and Recreation; Environmental Education; Natural Resource Protection; Community Stewardship; Economic Development

Existing Funding: Staff time; local parks and recreation resources; existing public access, tourism, conservation, and planning efforts.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Potential Funding Sources:

- | | |
|---|---|
| ☒ NC RCCP | ☒ NCRF |
| ☐ FEMA BRIC / FMA | ☐ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☒ Land & Water Fund | ☐ Section 205(j) |

Scoping Questions:

- Where can public access be expanded without degrading sensitive natural resources or increasing flood exposure?
- Which waterfront, park, or natural resource sites are best suited for low-impact recreation, education, or stewardship?
- How can public access improvements incorporate flood-resilient design, interpretive signage, and nature-based features?

Estimated Cost:



Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☒ Public Outreach and Engagement

Anticipated Benefit: Increases community connection to local waterways and natural resources, supports environmental education and stewardship, improves quality of life, enhances recreation and tourism opportunities, and creates visible examples of flood-resilient and environmentally sensitive public access.

Estimated Timeline:



Priority Rating:



Action 6.4: Develop Multi-Use Trails and Stewardship Programs

Action Description: Develop multi-use trails, blueway connections, and stewardship programs that improve safe access to natural areas, connect residents and visitors to parks and waterways, support eco-tourism, and promote long-term care of community resources. This action should prioritize opportunities along drainage corridors, waterways, and other natural conveyance areas where access improvements can support recreation, nature-based tourism, and awareness of flood risk, stormwater management, and watershed function. Potential improvements may include trail corridors, bike and pedestrian routes, paddling access, interpretive routes, volunteer stewardship programs, and educational signage that explains local drainage systems, wetlands, flood risk, wildlife habitat, and resilience strategies. Trail and stewardship planning should consider flood-prone areas, sensitive habitats, public safety, accessibility, maintenance needs, visitor experience, and opportunities to pair public access with education, eco-tourism, and long-term stewardship.

Location: Countywide, focusing on drainage corridors, parks, waterfronts, waterways, trails, public and conservation lands, rural road connections, and priority areas identified through parks, transportation, drainage, and resilience plans.

Source: Public Survey; Workshop Results; Existing Plans and Efforts Review; CAT Input; Vulnerability Assessment

Supporting Function: Parks and Recreation; Public Access; Environmental Stewardship; Transportation Connectivity; Natural Resource Protection; Eco-Tourism and Local Economic Development

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Scoping Questions:

- Where can trails, blueways, or signage improve access to parks, waterways, and natural areas?
- Which routes can avoid sensitive habitats and withstand flooding?
- What partnerships or stewardship programs can support long-term maintenance and engagement?

Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☒ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☒ Public Outreach and Engagement

Estimated Timeline:



Responsible Entity: Pasquotank County Planning Department; Parks and Recreation; Stormwater Engineer

Potential Partners: Albemarle Commission, Elizabeth City, NCDOT, NC Parks and Recreation, NC Division of Coastal Management, NC Wildlife Resources Commission, Elizabeth City State University, schools, Green Saves Green, local nonprofits, land trusts, tourism partners, bicycle and pedestrian advocates, and community organizations.

Existing Funding: Staff time; local parks and recreation resources; existing transportation, tourism, conservation, and community volunteer programs.

Potential Funding Sources:

- ☒ NC RCCP
- ☐ FEMA BRIC / FMA
- ☐ SWIA Loan / Grant
- ☒ Land & Water Fund
- ☒ Other: Parks and Recreation Trust Fund (PARTF)
- ☐ NCRF
- ☐ SARE Program
- ☐ Sea Grant Office
- ☐ Section 205(j)

Estimated Cost:



Anticipated Benefit: Expands safe and inclusive access to parks, waterways, and natural resources; supports recreation, eco-tourism, local economic development, and public health; builds community stewardship; strengthens awareness of local resilience and environmental issues; and creates long-term opportunities for residents and visitors to participate in maintaining and protecting community assets.

Priority Rating:



Action 6.5: Develop a Resilient Homes Program

Action Description: Develop a Resilient Homes Program to help residents and property owners reduce flood, storm, and power outage risks through practical, property-level mitigation measures. The program should connect households with information, technical assistance, and funding opportunities for home elevation, floodproofing, drainage improvements, septic protection, wind retrofits, backup power, and other resilience upgrades. The program may include outreach materials, workshops, contractor or technical assistance resources, grant application support, and targeted assistance for low-income households, older adults, residents with access and functional needs, and properties with repeated flood impacts. This action should prioritize homes in flood-prone areas, low-lying waterfront communities, repetitive flooding locations, and areas identified through the vulnerability assessment and public engagement process.

Location: Countywide, with emphasis on flood-prone neighborhoods, waterfront and low-lying areas, homes with repetitive flooding, areas with septic vulnerability, and locations identified through resident reports, public engagement, and the vulnerability assessment.

Source: Public Survey; Workshop Results; Vulnerability Assessment; Risk Assessment; CAT Input; Existing Plans and Efforts Review

Responsible Entity: Pasquotank County Planning Department; Emergency Management; Stormwater Engineer; County Administration

Potential Partners: Albemarle Commission, NC Emergency Management, NC Division of Coastal Management, NC Department of Environmental Quality, FEMA, NC Office of Recovery and Resiliency, USDA Rural Development, NC Cooperative Extension, Soil and Water Conservation District, local nonprofits, faith-based organizations, community groups, housing organizations, contractors, insurance providers, and utility providers.

Supporting Function: Residential Adaptation; Flood Mitigation; Emergency Preparedness; Housing Resilience; Public Education; Capacity Building

Existing Funding: Staff time; local planning and emergency management resources; existing public outreach channels; ongoing resilience, housing, and hazard mitigation planning.

Hazards Addressed:

- ☒ Coastal Flooding
- ☒ Stormwater Flooding
- ☐ Shoreline Erosion
- ☐ Saltwater Intrusion

Potential Funding Sources:

- | | |
|---|---|
| ☒ NC RCCP | ☐ NCRF |
| ☐ FEMA BRIC / FMA | ☐ SARE Program |
| ☐ SWIA Loan / Grant | ☐ Sea Grant Office |
| ☐ Land & Water Fund | ☐ Section 205(j) |

Scoping Questions:

- Which homes and neighborhoods face repeated flooding, drainage issues, septic vulnerability, or power outage risks?
- What property-level mitigation measures are most feasible and beneficial for residents?
- How can the County connect residents with technical assistance, contractors, grants, and priority support for vulnerable households?

Estimated Cost: *Dependent on whether technical assistance grants are given to individuals or if the program is focused on resource sharing and volunteer audits.*



Type of Solution:

- ☒ Study or Planning Effort
- ☐ Policy or Regulation
- ☐ Infrastructure Improvements
- ☐ Nature-Based Solution Projects
- ☐ Facility Upgrades or Adaptations
- ☒ Public Outreach and Engagement

Anticipated Benefit: Helps residents reduce property damage, improve household preparedness, protect health and safety, maintain access to power and wastewater service during hazard events, and pursue funding for home-level resilience improvements. The program also strengthens equity by helping vulnerable households access information, technical support, and resources.

Estimated Timeline:



Priority Rating:



Appendix **A**

Community Action Team (CAT) Touchpoints

Table A.1. Logged Touchpoints with CAT

Date	Touchpoint	Format	Goal / Feedback Provided
Dec. 18, 2025	CAT Invitation	<i>Email Correspondence</i>	Invited Community Action Team (CAT) members to participate in the planning process and attend the project kickoff meeting.
Jan. 14, 2026	CAT Kickoff Meeting	<i>Virtual Meeting</i>	Provided an overview of the RCCP program, project goals and timeline, CAT roles and responsibilities, and facilitated discussion on critical assets, community vision, and resilience goals.
Jan. 23, 2026	Asset Inventory Refinement and Kickoff Meeting Follow-Up	<i>Email Correspondence</i>	Requested feedback on the draft asset inventory and identification of additional assets. Shared kickoff meeting materials with members who were unable to attend.
Mar. 12, 2026	Vulnerability Assessment Workshop Invitation	<i>Email Correspondence</i>	Distributed the workshop flyer and Microsoft Teams meeting link to CAT members.
Mar. 19, 2026	Vulnerability Assessment Workshop	<i>Virtual Public Workshop</i>	Presented the draft vulnerability assessment findings and gathered stakeholder feedback on results and community vulnerabilities.
Apr. 3, 2026	Action Development Workshop Invite	<i>Email Correspondence</i>	Distributed the workshop flyer and associated information to CAT members.
Apr. 15, 2026	Action Development Workshop	<i>In-Person Public Workshop</i>	Engaged participants in developing resilience actions and collecting input on the community vision and goals. Attendees also learned about the vulnerability assessment findings and overall resilience planning process.
May 18, 2026	Vulnerability Assessment Results Distribution	<i>Email Correspondence</i>	Shared the final vulnerability assessment report, supporting scoring data, and associated mapping products for review.
May 28, 2026	Action Development Workshop Results and Plan Update	<i>Email Correspondence</i>	Distributed workshop feedback and action development results to CAT members and provided a project status update.
Jun. 4, 2026	CAT Action Prioritization Meeting	<i>Virtual Meeting</i>	Facilitated prioritization of resilience actions developed through stakeholder engagement, workshop feedback, and best-practice research.
Jun. 4, 2026	CAT Action Prioritization Meeting Follow-Up	<i>Email Correspondence</i>	Shared the presentation and meeting materials with participants and stakeholders who were unable to attend.
Aug. 26, 2026	Draft Plan Review	<i>Email Correspondence</i>	Provided the draft Pasquotank County Resilience Strategy for CAT review and comment.

Appendix

B

Community Action Team (CAT) Touchpoint Presentations

CAT Kick-off Meeting | January 14, 2026

PASQUOTANK COUNTY

RESILIENCE STRATEGY

Weston & Sampson

DEQ

PASQUOTANK COUNTY-NC

CAT KICK-OFF MEETING

JANUARY 2026

1

AGENDA ITEMS



Great Dismal Swamp
Photo by Weston & Sampson

01

Welcome & Introduction

02

About the RCCP

03

Community Action Team (CAT) Responsibilities

04

Existing Plan Review Summary

05

Vision and Goal Statements Exercise

The vision and goals exercise will require the usage of your personal device.



06

Asset Inventory

07

Engagement Materials & Next Steps

CAT KICK-OFF MEETING

DEQ

RESILIENT PASQUOTANK COUNTY COMMUNITY

PASQUOTANK COUNTY-NC

Weston & Sampson

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CAT Kick-off Meeting | January 14, 2026

CONSULTANT TEAM INTRODUCTIONS





Bella Purdy
Project Manager



Erin Herock
Assistant Project Manager



Elizabeth Suffa
Resilience Planner

CAT KICK-OFF MEETING

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CAT TEAM INTRODUCTIONS

Bill Kruse
Nita Coleman
Dwane Hinson
Charles Jordan
Rodney Johnson
Kevin Brickhouse
Maurice Berry
Steve Harris
Holly White
Brian Parnell
Kevin Kupietz

Tell us about yourself!
Please raise your hand and answer the following:

- Why were you interested in serving on the Community Action Team (CAT)?*
- What is your favorite thing about Pasquotank County?*



CAT KICK-OFF MEETING

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CAT Kick-off Meeting | January 14, 2026

THE RESILIENT COASTAL COMMUNITIES PROGRAM

2

The RCCP is a state-local partnership designed to help overcome barriers in coastal resilience and adaptation planning, boost local government capacity, and support a proactive, sustainable, and equitable approach to coastal resilience planning and project implementation.

Program Objectives:

-  Address barriers to coastal resilience at the local level
-  Assist communities with risk & vulnerability assessments
-  Help communities develop a portfolio of well-planned and prioritized projects
-  Advance priority projects to "shovel-ready" status
-  Link communities to funding streams for project implementation

North Carolina
**RESILIENT
COASTAL
COMMUNITIES
PROGRAM**

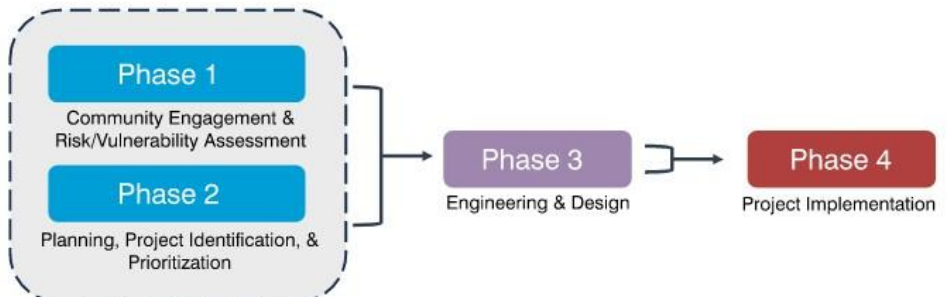
CAT KICK-OFF MEETING     5

5

THE RCCP

2

- Weston & Sampson has been hired as the technical consultant to complete **Phases 1 and 2** of the RCCP for Pasquotank County.
- Once communities complete Phases 1 & 2, they become eligible to apply for additional funding via Phase 3 and Phase 4.



CAT KICK-OFF MEETING     6

6

CAT Kick-off Meeting | January 14, 2026

WHAT IS CLIMATE RESILIENCE?



Adaptation

The process of adjusting to new (climate) conditions in order to reduce risks to valued assets



Vulnerability

The propensity or predisposition of assets to be adversely affected by hazards. Vulnerability encompasses exposure, sensitivity, potential impacts, and adaptive capacity



Resilience

The capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from a disruption

Definitions from the U.S. Climate Resilience Toolkit

CAT KICK-OFF MEETING







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PROJECT SCHEDULE

	2025					2026					
MONTH	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Project Management											
1.0 Project Kick-off Meeting											
1.1 Develop a CAT											
Existing Conditions Review and Analysis											
1.2 Review Existing Plans & Efforts											
1.3 Set Vision and Goals											
1.4 Develop an Engagement Strategy											
Vulnerability Assessment											
1.5 Identify and Map Assets, Infrastructure, Populations											
1.6a Identify and Map Hazards											
1.6b Assess Vulnerability											
1.6c Estimate Risk											
Action Development											
2.1 Identify a Suite of Potential Problems											
2.2 Consolidate and Prioritize Projects											
2.3 Create a Resilience Strategy											



Community Engagement Event



Community Action Team Touch Point

CAT KICK-OFF MEETING



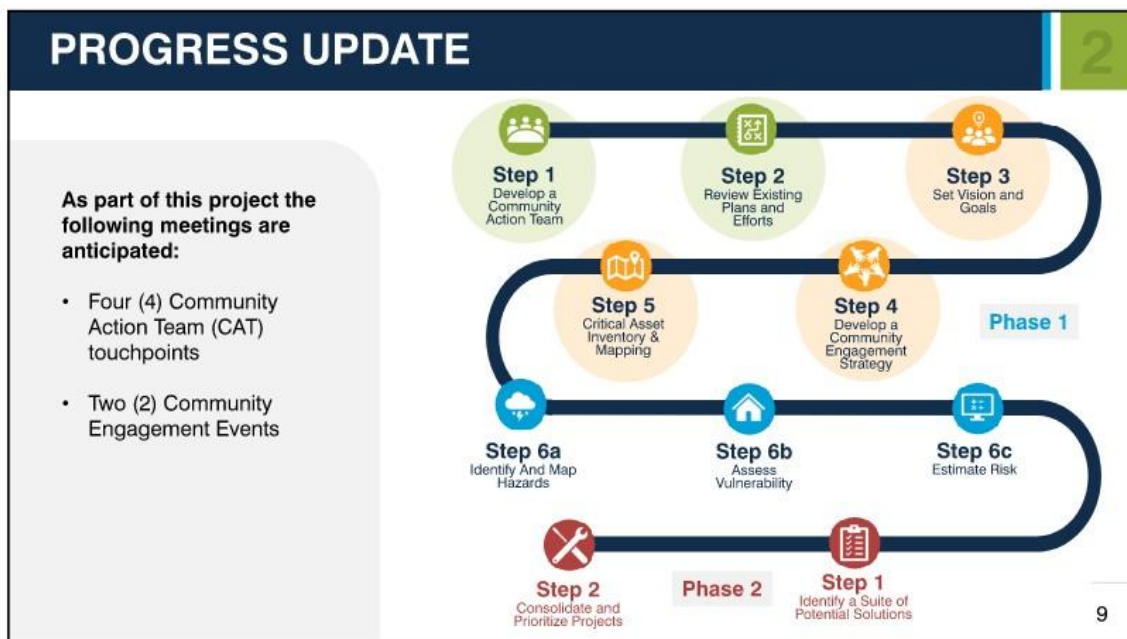




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CAT Kick-off Meeting | January 14, 2026



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CAT Kick-off Meeting | January 14, 2026

KEY INVOLVEMENT IN THE PLAN 3

1

Contribute your ideas about **Vision and Goals** today

2

Attend meetings to give input on plan progress and provide local knowledge

3

Attend a workshop to help develop actions for the resilience strategy in the Spring!

4

Please look out for our emails to stay updated on the strategy!

CAT KICK-OFF MEETING

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EXISTING PLAN REVIEW 4

We reviewed existing local and regional efforts for Pasquotank County

This includes:

- County ordinances
- State climate planning documents
- Regional Vulnerability and Risk Assessment
- Land use plans
- Flood mitigation plans

CAT KICK-OFF MEETING

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EXISTING PLANS REVIEW FINDINGS

4

- **The county and region have numerous existing plans that reviewed hazard information**, particularly stormwater and coastal flooding. Some plans provided detailed maps or narratives of flood-prone areas.
- **County-wide resiliency planning remains limited.** The only resiliency related strategy for Pasquotank County is the *Hurricane Matthew Redevelopment Plan*. The *Newland Township Resiliency Strategy* is another resiliency focused effort of the County, but it only focused on a portion of the county.
- **There has been limited resiliency engagement at the county level**, resulting in a fragmented understanding of residents' and businesses' concerns about hazards.



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DEQ

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EXISTING PLANS REVIEW FINDINGS

4

Key themes emerging from the vision and goal statements of existing plans:

- Environmental Conservation & Natural Resource Protection
- Economic Development & Tourism
- Rural Character Protection & Agricultural Resource Preservation
- Resilient Infrastructure & Recovery Capacity
- Support and Outreach for Vulnerable Populations

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CRAFTING VISION STATEMENTS

5

Some example vision / goal statements from existing plans that reflect resiliency include the following:

- ***"I envision Pasquotank County balances economic development and environmental conservation and resiliency activities."*** – Newland Township Resiliency Strategy
- ***"Direct development away from sensitive environmental areas and future flood prone areas, and toward areas with sustainable infrastructure."*** – Pasquotank County Land Use Plan – CAMA
- ***"Act thoughtfully and collaboratively to develop equitable solutions for the most socially challenging effects of climate change."*** – NC Climate Risk Assessment Plan
- ***"I envision Pasquotank County as a place that is the jewel of the Inner Banks."*** – Newland Township Resiliency Strategy

CAT KICK-OFF MEETING



Weston & Sampson

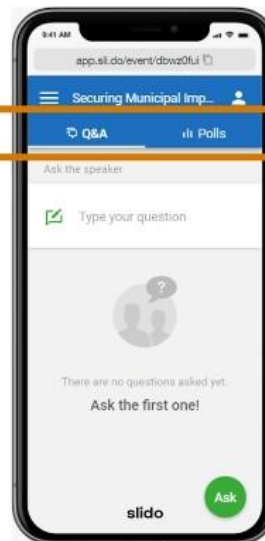
15

Use Slido to submit your vision statement for the plan!

Please take a moment to navigate to Slido.com on your computer or smart phone.

Joining as a participant? # Enter code here →

**#Pasquotank
County**



You can move between the Q&A tab and the polls tab!

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What are some challenges that the County faces in regards to natural hazard events?

Do not edit
How to change the
design

i The Slido app must be installed on every computer you're presenting from

slido

17



What are some strengths of the County?

Do not edit
How to change the
design

i The Slido app must be installed on every computer you're presenting from

slido

18



What is a goal you would like see achieved by 2035?

Do not edit
How to change the
design

 The [Slido app](#) must be installed on every computer you're presenting from

slido

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CRAFTING VISION STATEMENTS

5

How to make your Vision Statement - Tips

We envision Pasquotank County as a place that _____.

In the future, our community will be _____.

To reduce the impacts of climate hazards, the County will _____.

CAT KICK-OFF MEETING

20

Do not edit
How to change the
design



Craft a 1-2 sentence vision statement for the County relating to resilience.

 The Slido app must be installed on every computer you're presenting from **slido**

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CLIMATE VULNERABILITY ASSESSMENT STEPS

6

-  **Crosswalk of Existing Plans & Climate Data** ✓
-  **Asset Identification**
-  **Vulnerability Assessment**
includes analysis of hazards, vulnerability, and risk



CRITICAL ASSETS THAT YOU MUST IDENTIFY AND MAP

- 1. Roads/Evacuation Routes
- 2. Water/sewer lines (if the community has them)
- 3. Community Government Service Offices (e.g., City/Town Hall)
- 4. Schools
- 5. Health Services
- 6. Public Safety or Emergency Services (e.g., Police/Fire)
- 7. Natural Assets (e.g., Natural areas, open space and parks)

CAT KICK-OFF MEETING     22

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CAT Kick-off Meeting | January 14, 2026

IDENTIFIED ASSET TYPES

6

Transportation

roadways, marinas, boat launches, airport, fuel stations

Food Retail

convenience stores, grocery stores

Financial and Economic Services

banks, credit unions, major employers, grain elevator, farmland

Natural Resources

parks, easements, conservation areas

Government Facilities

municipal buildings, fire station, correctional institution

Utilities and Lifeline Services

cell towers, substation, solid waste facility, pump station, water and wastewater lines

Cultural and Community

community center, churches, schools

Assets that fell within the boundaries of Elizabeth City were excluded from the inventory.

Most public health and health services assets were within these boundaries and have been assessed in Elizabeth City's Resiliency Strategy.

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SOURCE OF DATA

6

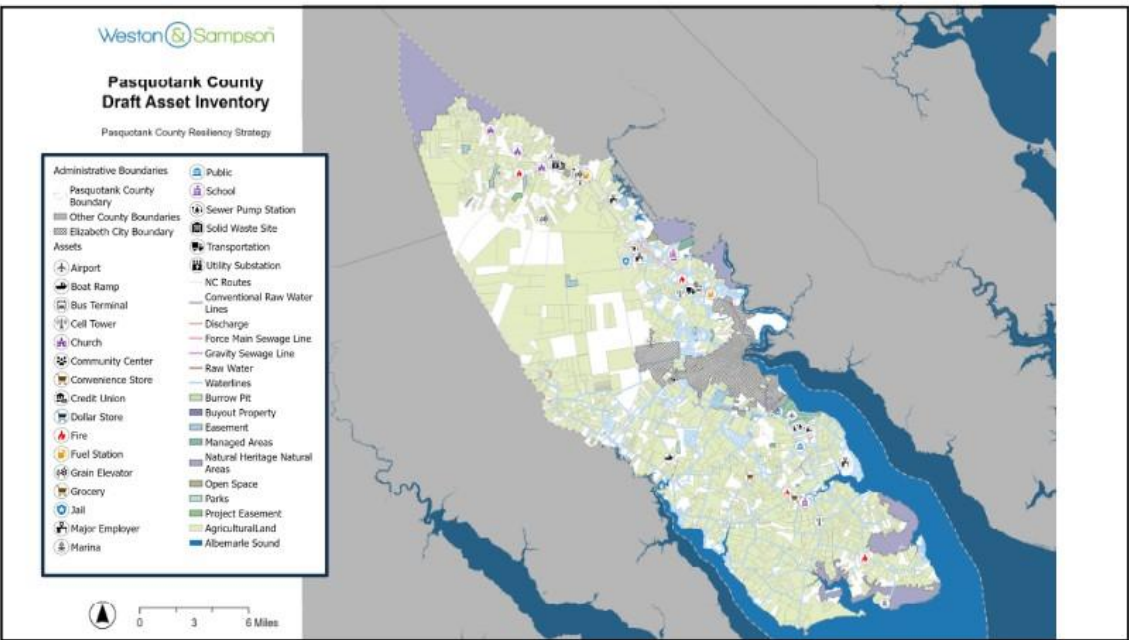
Data Source	Description of Source	Asset Types
NC OneMap	Authoritative statewide geospatial data	Boundaries, Cell towers, Schools, Airport, Correctional Institution, Parks
NC Natural Heritage Program	Ecological and conservation resource data	Natural Resources
NC DOT	State transportation infrastructure and assets	Roadways
Pasquotank County GIS	ArcGIS REST Services Directory	Agricultural Land, Water and Wastewater Lines, Substation, Solid waste facility, Pump stations
Google Maps	Current assets mapped by desktop research	Major Employers, Marinas and Boat Ramps, Convenience stores, Grocery stores, Churches

CAT KICK-OFF MEETING

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CAT Kick-off Meeting | January 14, 2026



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ASSET INVENTORY SURVEY

Please fill out this survey to provide feedback on the asset inventory.

Open to the CAT to provide feedback on the asset categories and types for the vulnerability assessment.

Please respond by February 15th

You should be able to access the survey without an account.



<https://tinyurl.com/PasquotankAssetSurvey>

CAT KICK-OFF MEETING



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CAT Kick-off Meeting | January 14, 2026

COMMUNITY ENGAGEMENT STRATEGY

7

Workshop to Kick-off the Resilience Strategy, define Vision & Goals, Share Preliminary Vulnerability Assessment Results

Host virtually to enhance participation throughout the County at onset of planning process.

Workshop on Action Development

Host at a strategic location in the County that would draw in participants to build momentum & develop actions for the resilience plan

Pop-up "Meeting in a Box"

Tabling at existing festivals, markets, or events that are well attended by residents and stakeholders across the county. Can be deployed by CAT members or County staff.



Help Shape a Resilient Future for Pasquotank County

Brochure with information on the plan + public survey

Pasquotank County Overview of the NC RCP Program & Resilience Strategy

In-person feedback board to gain insight on concerns and desired outcomes.

CAT KICK-OFF MEETING




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COMMUNITY ENGAGEMENT STRATEGY

7

Do you have ideas for locations for pop-up engagement events?

Ideas include:

- Potato Festival (May)
- Bocce Beer and Bites (April)
- Farmers markets
- Existing organization meeting times
- First Friday Artwalk

CAT KICK-OFF MEETING




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CAT Kick-off Meeting | January 14, 2026

NEXT STEPS

7

1

CAT members to feedback on the draft critical asset inventory using the survey link by February 15th.

2

Finalize and share engagement strategy for County and CAT to review. Determine date(s) to table at with materials.

3

Touch-point end of February on a draft vision and goals for the County based on CAT and public input.

CAT KICK-OFF MEETING









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Thank you!

CAT KICK-OFF MEETING









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Vulnerability Assessment Workshop | March 19, 2026



1

AGENDA ITEMS



Great Dismal Swamp
Photo by Weston & Sampson

- 01 Welcome & Introduction
- 02 About the RCCP
- 03 Project Approach and Schedule
- 04 Existing Plan Review Summary
- 05 Vulnerability Assessment Methodology & Results
- 06 Next Steps

Some activities today will require the usage of your personal device.

VIRTUAL PUBLIC WORKSHOP

DEQ

REGULATORY & COMPLIANCE PROGRAM

PASQUOTANK COUNTY

Weston & Sampson

2

2

Vulnerability Assessment Workshop | March 19, 2026

CONSULTANT TEAM INTRODUCTIONS

1

Weston & Sampson



Bella Purdy
Project Manager



Erin Herock
Assistant Project Manager



Elizabeth Suffa
Resilience Planner

VIRTUAL PUBLIC WORKSHOP

DEQ

PASQUOTANK COUNTY

Weston & Sampson

3

3

WORKSHOP LOGISTICS

1



Drop questions, comments, or resources in the chat anytime.



Use the "Raise Hand" feature to ask a question or share comments during designated times.



Please keep your device on "mute" for the duration of the presentation.

VIRTUAL PUBLIC WORKSHOP

DEQ

PASQUOTANK COUNTY

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4

4

Vulnerability Assessment Workshop | March 19, 2026

THE RESILIENT COASTAL COMMUNITIES PROGRAM 2

The RCCP is a state-local partnership designed to help overcome barriers in coastal resilience and adaptation planning, boost local government capacity, and support a proactive, sustainable, and equitable approach to coastal resilience planning and project implementation.

Program Objectives:

-  Address barriers to coastal resilience at the local level
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-  Help communities develop a portfolio of well-planned and prioritized projects
-  Advance priority projects to "shovel-ready" status
-  Link communities to funding streams for project implementation

North Carolina
RESILIENT COASTAL COMMUNITIES PROGRAM

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CLIMATE VULNERABILITY ASSESSMENT STEPS

1

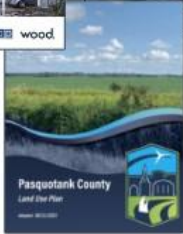
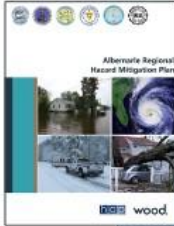
**Review Existing Plans & Climate Data**

2

**Asset Identification**

3

**Vulnerability Assessment**
includes analysis of hazards, vulnerability, and risk



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7

7

EXISTING CONDITIONS

As part of the planning process, we reviewed **17 plans and efforts** related to planning and resiliency for Pasquotank County including the Albemarle Regional Hazard Mitigation Plan and Newland Township Resiliency Strategy.

Plans and efforts were examined for **vision and goal statements**, **critical assets**, and **potential resilience projects**.

We want to hear your feedback on the strengths of the community and what you hope to see in the future!



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Pasquotank County Resilience Strategy | 90

Vulnerability Assessment Workshop | March 19, 2026

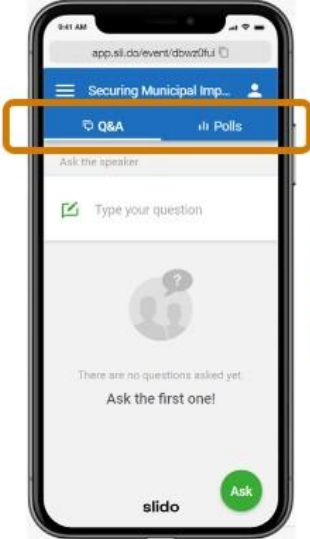
Use Slido to submit your vision statement for the plan!

Please take a moment to navigate to [Slido.com](https://slido.com) on your computer or smart phone.

Joining as a participant? [→](#)

#Pasquotank Resilience





You can move between the Q&A tab and the polls tab!

9



What features, places, or aspects of Pasquotank County do you love most?

*Do not edit
How to change the
design*

 The [Slido app](#) must be installed on every computer you're presenting from

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Do not edit
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What features or improvements would help Pasquotank County remain livable and resilient for the next 10 years?

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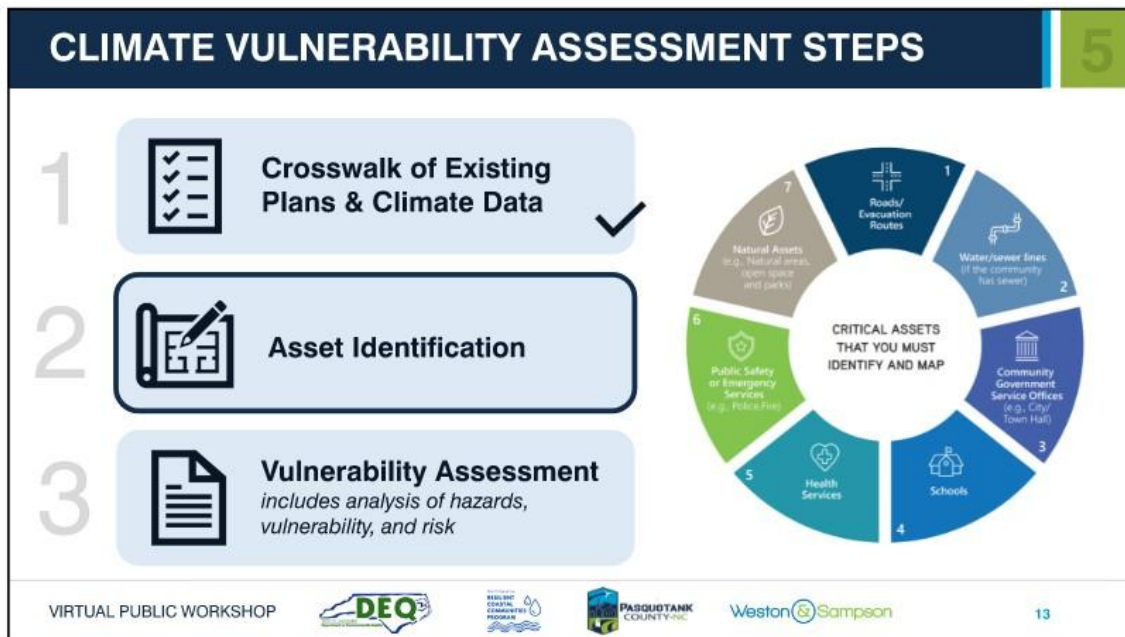
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What resilience areas do you think the County should focus on improving?

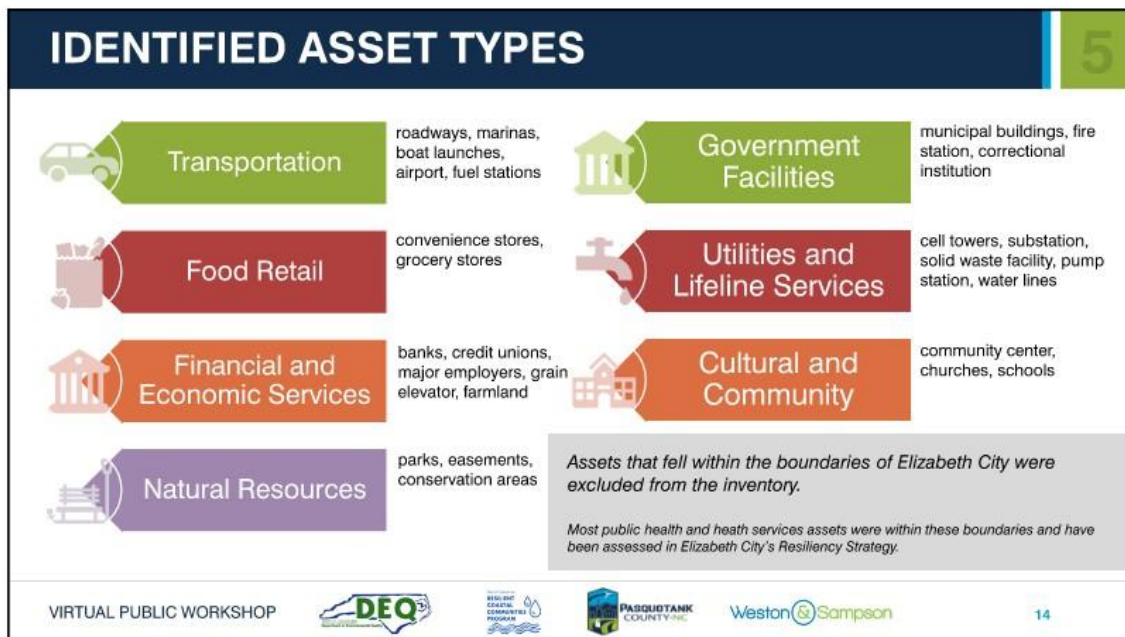
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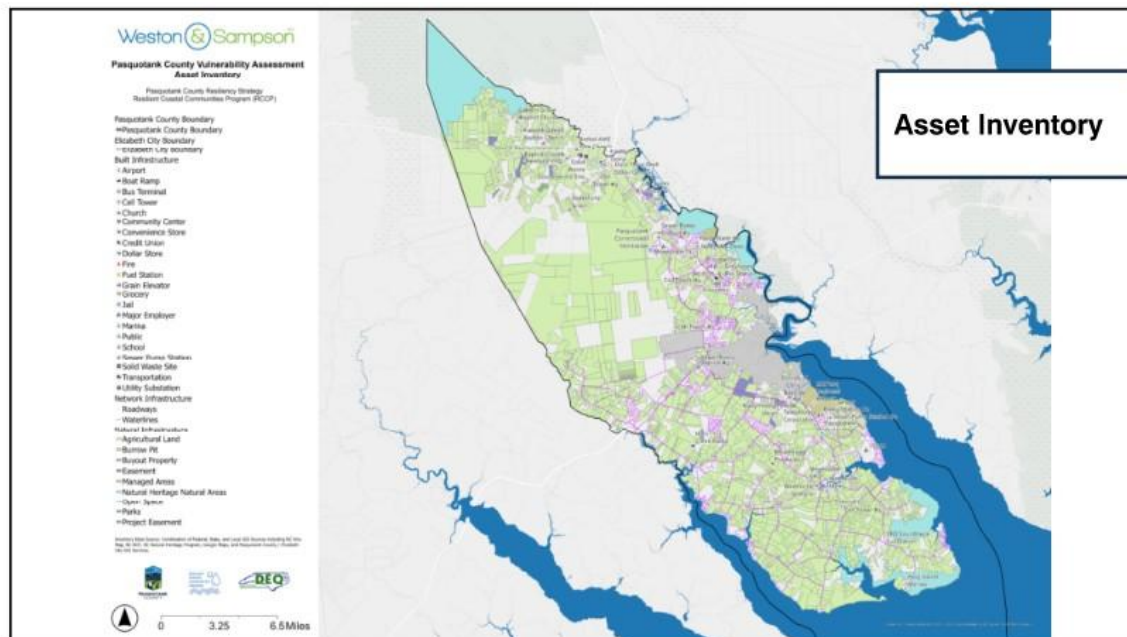


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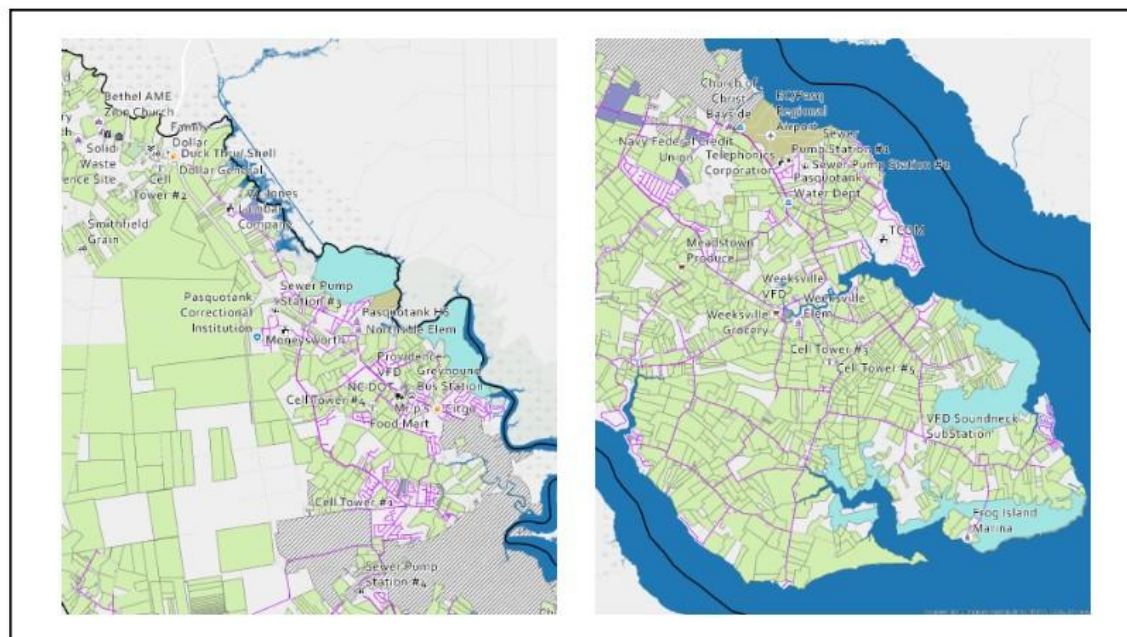


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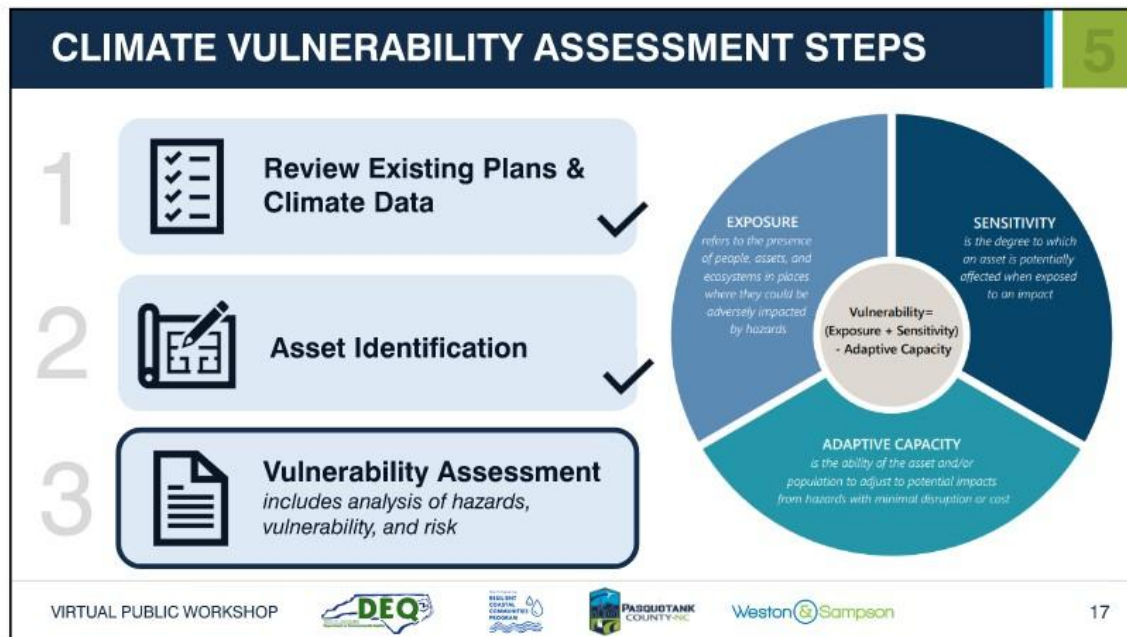


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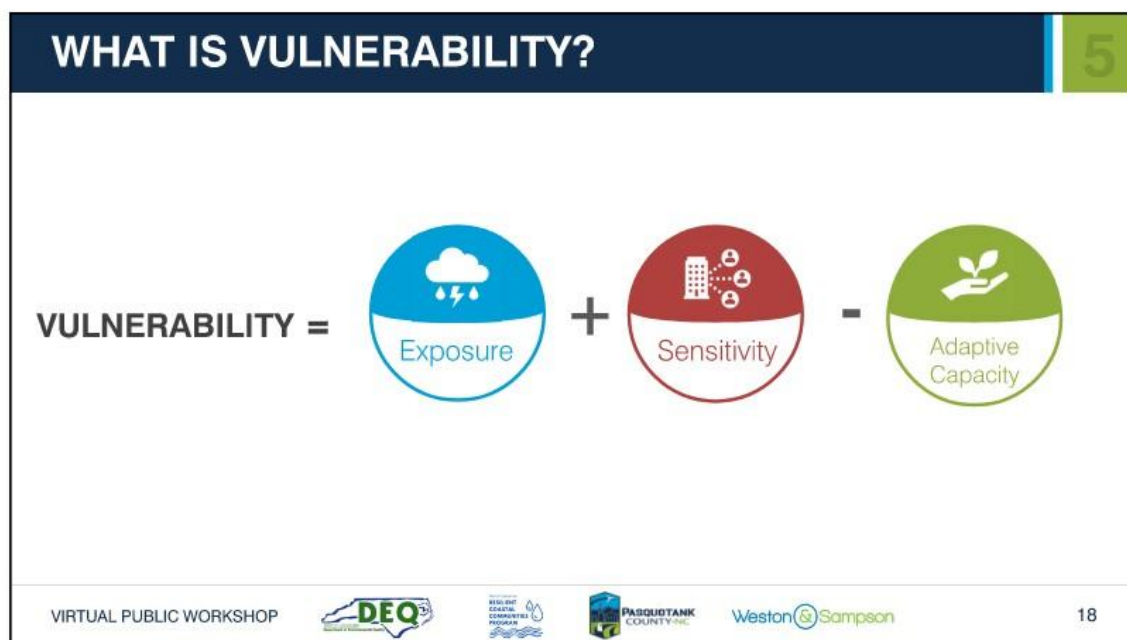


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EXPOSURE



Exposure

refers to the presence of people, assets, and ecosystems in places where they could be adversely impacted by hazards



For example:

If flooding is a known hazard, exposure may include homes, roads, or natural areas located in places where floodwaters can reach them.

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19

19

SENSITIVITY



Sensitivity

Is the degree to which an asset is potentially affected when exposed to an impact



For example:

If flooding occurs, critical facilities like hospitals may be more sensitive because even small disruptions can cause significant consequences.

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ADAPTIVE CAPACITY 5



Adaptive Capacity

Is the ability of the asset and/or population to adjust to potential impacts from hazards with minimal disruption or cost



For example:

If flooding occurs, built assets constructed with more resilient materials or built to modern standards tend to have higher adaptive capacity.

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EXPOSURE INDICATORS 5

Climate hazards used as exposure indicators:



Historical/Present-Day Flooding Exposure



Storm Surge



Tidal Flooding



Frequently Flooded Areas

We want your feedback on these areas!

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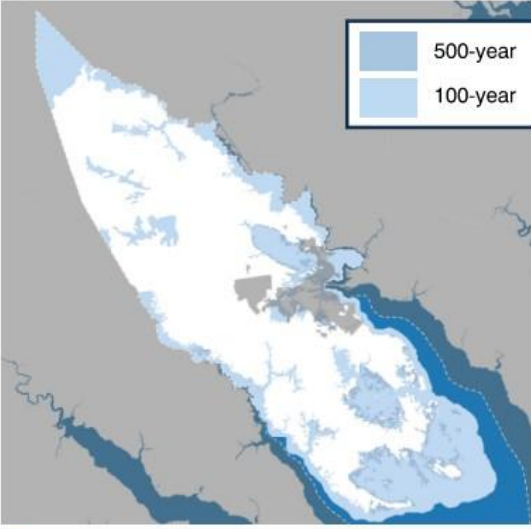
CLIMATE HAZARDS

Historical/Present-Day Flooding Exposure

FEMA Flood Zones
Geographic areas that FEMA has defined according to varying levels of flood risk

500-year Storm: 0.2% annual chance of occurring

100-year Storm: 1% annual chance of occurring



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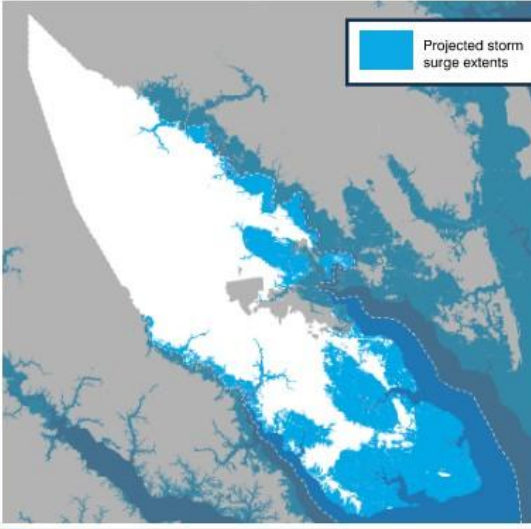
CLIMATE HAZARDS

Storm Surge

Storm surge is a rise in water levels above the normal tide, caused when strong storm winds push seawater onto the shore by hurricanes.

42 hurricanes and tropical storms have passed within the Albemarle Region from 1998 - 2018.
Source: Albemarle Regional Hazard Mitigation Plan (2020)

On average, North Carolina experiences a hurricane approximately **once every two years.**
Source: Albemarle Regional Hazard Mitigation Plan (2020)



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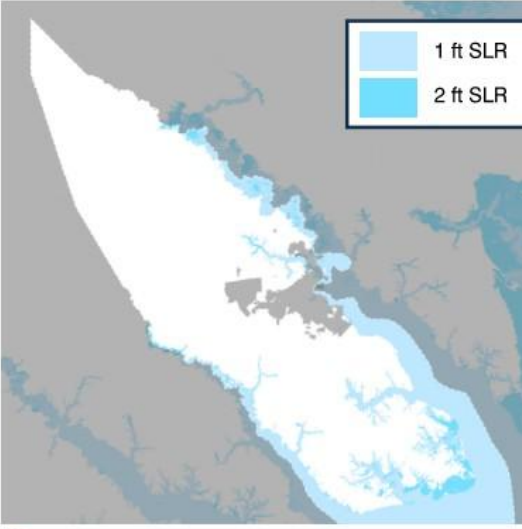
CLIMATE HAZARDS

Tidal Flooding

Sea level rise refers to the long-term increase in ocean water levels, which leads to higher tides and more frequent tidal flooding.

From 2020-2060, Pasquotank County sea levels are expected to rise **1.1 to 1.4ft.**

Source: NOAA 2022 Sea Level Rise - Intermediate-Low Scenario (2000-2060)



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CLIMATE HAZARDS

Frequently Flooded Areas

Models aren't perfect! Sometimes there are areas that flood frequently but aren't reflected in our maps—this is where your local knowledge is essential.

Please fill out this survey to provide feedback on areas you see the most flooding.



<https://tinyurl.com/PasquotankResiliencySurvey>

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SENSITIVITY INDICATORS

5

These sensitivity indicators increase the severity of impacts.

Vulnerable Populations

Vulnerable population areas may be more affected by mobility barriers and limited funding available to residents.

Criticality

Disruption to critical assets like hospitals, fire stations, and police stations could create widespread issues.

Habitat Value

Damage to key ecological areas can cause major losses to natural resources.

Pipe Diameter

Damage to larger waterlines can disrupt service to a wider area.

Road Type

Disruptions to larger and more frequently used roads impact more residents.

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ADAPTIVE CAPACITY INDICATORS

5

These adaptive capacity indicators reduce impacts and help an asset recover.

Redundancy

Assets supported by more than one backup facility type have greater capacity to maintain operations during hazard impacts.

Building Age

Modern standards increase adaptive capacity.

Pipe Material

Stronger pipe materials and modern standards increase adaptive capacity.

Soil Drainage + Wetlands

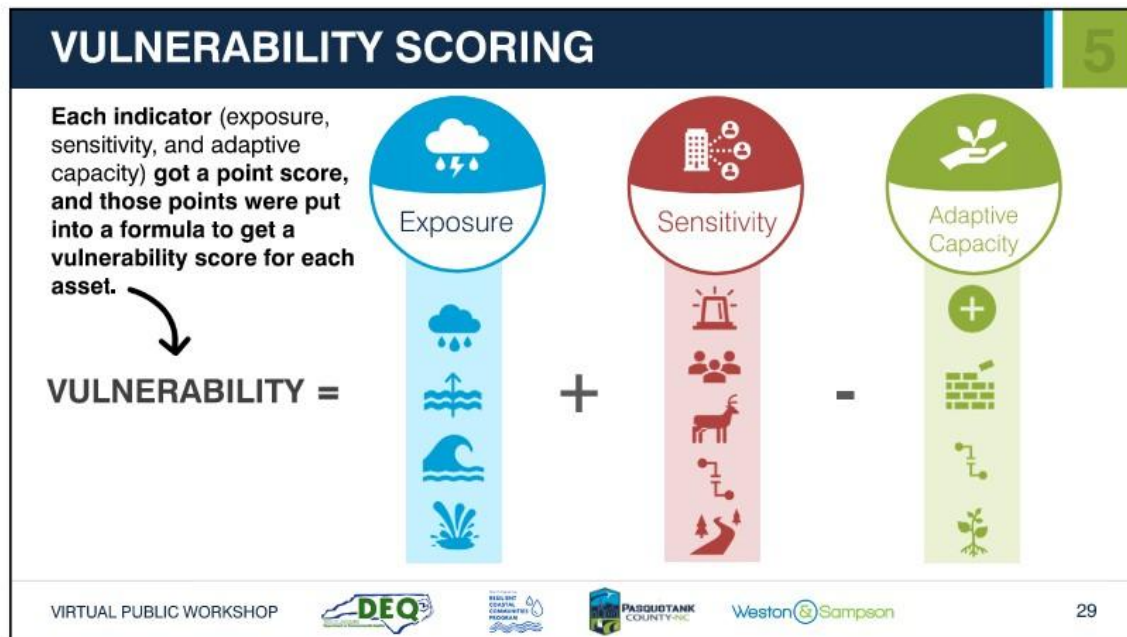
Well-drained soils and wetlands help absorb floodwater, increasing adaptive capacity for natural resources and roads.

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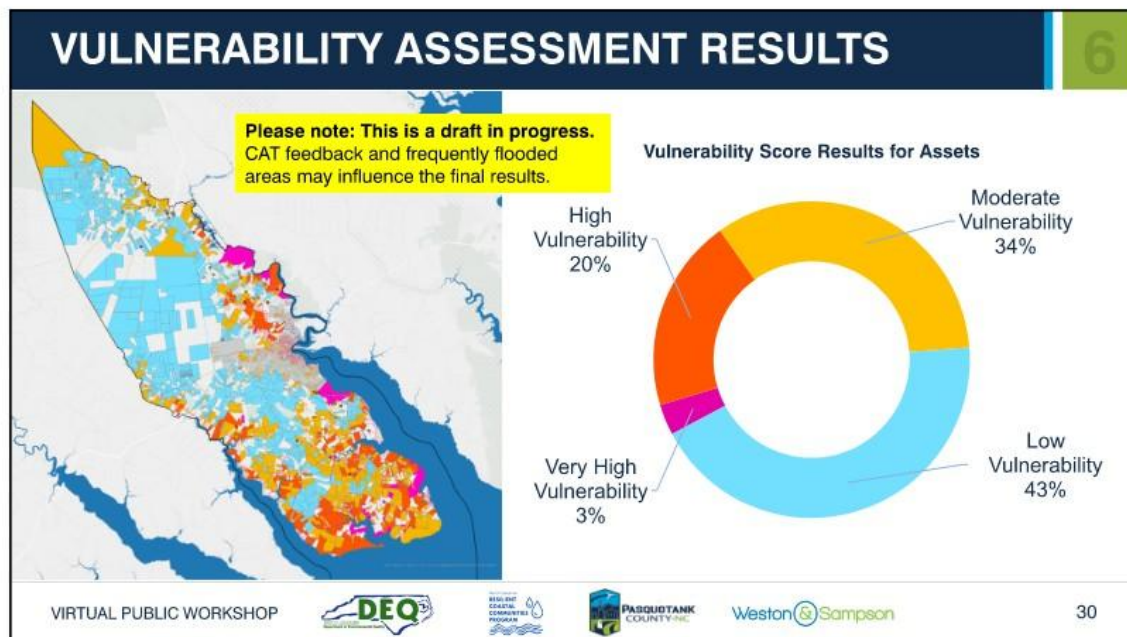
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VERY HIGH & HIGH VULNERABILITY ASSETS

5

Please note: This is a draft in progress.
 CAT feedback and frequently flooded areas may influence the final results.

Transportation 1,000+ roadways	Government Facilities Weeksville Volunteer Fire Dept.	
Food Retail - Weeksville Grocery - Family Dollar	Utilities and Lifeline Services - VFD Soundneck Substation - Sewer Pump Stations - Cell Towers	
Financial and Economic Services - Navy Federal Credit Union 600+ farms	Cultural and Community 4 Churches - Weeksville Elementary	
Natural Resources - Frog Island Marina - Mead's Pool & Rec Center - Knobbs Creek - Coast Guard Base - Pasquotank River/Canal Junction Swamp - Shipyards Landing Natural Area - Big Flatty Creek - Little Flatty Creek - Sawmill Park - Fun Junction - WRC Gregory Burrow Pit + additional open space and easements		

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31

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HOW CAN YOU BE INVOLVED?

6

1

Contribute your ideas about the **Vulnerability Assessment** today

2

Attend a workshop to help develop actions for the resilience plan in April

3

Check out updates about the Resilience Strategy on the County website

VIRTUAL PUBLIC WORKSHOP
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Vulnerability Assessment Workshop | *March 19, 2026*



33

Action Development Workshop | April 15, 2026



1

AGENDA ITEMS



Great Dismal Swamp
Photo by Weston & Sampson

- 01 Welcome & Introduction
- 02 About the RCCP
- 03 Resiliency Strategy Overview
- 04 What We've Heard so Far
- 05 Workshop Activities

PUBLIC WORKSHOP

DEQ

PASQUOTANK COUNTY

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2

2

Action Development Workshop | April 15, 2026

WHO IS HERE TODAY



Shelley L. Cox
Planning & Inspections Director



Bella Purdy
Resilience Team Leader



Erin Herock
Resilience Planner



Elizabeth Suffa
Resilience Planner



Julia MacNelly
Engagement Support

PUBLIC WORKSHOP



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THE RESILIENT COASTAL COMMUNITIES PROGRAM

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North Carolina
**RESILIENT
COASTAL
COMMUNITIES
PROGRAM**



PUBLIC WORKSHOP



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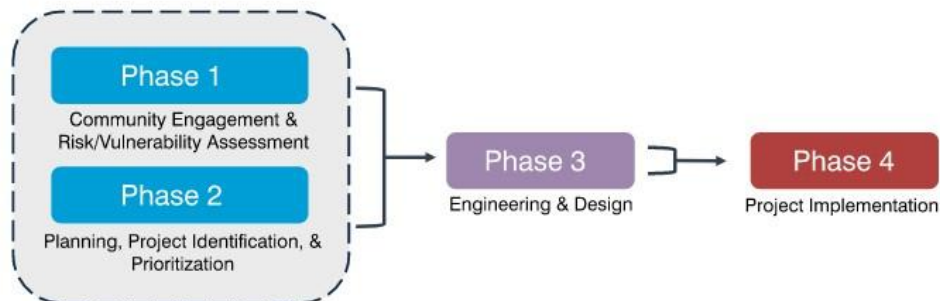
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Action Development Workshop | April 15, 2026

THE RCCP

2

- **Weston & Sampson** has been hired as the technical consultant to complete **Phases 1 and 2** of the RCCP for Pasquotank County.
- Once communities complete Phases 1 & 2, they become eligible to apply for additional funding via Phase 3 and Phase 4.



PUBLIC WORKSHOP



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WHY ACT NOW?

2

Pasquotank County is not only addressing today's challenges, but is actively preparing for the risks of tomorrow.

Increasing natural hazard frequency and intensity impacts...

- Residents and businesses
- Aging and at-risk infrastructure
- Agricultural land
- Sensitive habitats and wetlands
- Local and regional economies



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HOW DO WE DEFINE RESILIENCE?

2



Adaptation

The process of adjusting to new (climate) conditions in order to reduce risks to valued assets



Vulnerability

The propensity or predisposition of assets to be adversely affected by hazards. Vulnerability encompasses exposure, sensitivity, potential impacts, and adaptive capacity



Resilience

The capacity of a community, business, or natural environment to prevent, withstand, respond to, and recover from a disruption

Definitions from the U.S. Climate Resilience Toolkit

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RESILIENCE STRATEGY SCHEDULE

3

2026

Winter



Develop a
Community
Action
Team



Existing Plan
Review



Conduct a
Vulnerability
Assessment



Develop
Preliminary
Actions

Summer



Prioritize
Actions



Develop
Resilience
Strategy

TODAY'S WORKSHOP

PUBLIC WORKSHOP



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8

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Action Development Workshop | April 15, 2026

WHAT WE'VE HEARD SO FAR

4

Through our Community Action Team (CAT), public input survey, virtual workshop, and pop-up event, we have gathered preliminary information on the County.

The following slides detail some of the challenges, strengths, and goals we have heard so far. >>>

PUBLIC WORKSHOP9

9

RESILIENCE CHALLENGES

4

Flooding Vulnerabilities

- Low-lying elevation
- Beaver dams
- Inadequate maintenance of stormwater systems
- Destruction of property
- Public safety during events

Agricultural Encroachment

- Development threats
- Saltwater intrusion

Pressures on Environmentally Sensitive Areas

- Waterfront development
- Septic usage
- Agricultural runoff and water quality issues

PUBLIC WORKSHOP10

10

Action Development Workshop | April 15, 2026

RESILIENCE STRENGTHS

4



Involved Organizations and Community

- Numerous service and Non-profit organizations
- Community engagement related to conservation and environmental protection projects



Employment and Geographic Opportunities

- Local businesses and regional hub
- Strong agricultural economy
- Geographic location
- Coast Guard



Natural Resources and Built Infrastructure

- Natural environment
- Abundance of open spaces
- Water utility system
- Proactive planning and drainage planning

PUBLIC WORKSHOP



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11

RESILIENCE GOALS

4



Stronger Public Engagement in Resilience

Need for stronger public engagement and community involvement in resilience planning



Definable and Actionable Strategies

Structured implementation framework for actions



Protect Agricultural Lands and Natural Resources

Centering in on agricultural areas and ecological sensitive communities



Build Flood-Resilient and Reliable Infrastructure

Bring transportation and drainage systems up to date for current flooding and future flood risks

PUBLIC WORKSHOP



12

12

Action Development Workshop | April 15, 2026

PRELIMINARY VISION AND GOALS

4

Based on CAT input, community engagement, and the review of existing conditions, this section presents the final vision statement and corresponding goals for the plan. These elements will directly inform and connect to the actions outlined later in the *Pasquotank County Resiliency Strategy*.

Vision Statement:

Pasquotank County will be a thriving community with diverse and robust economic opportunities while balancing growth pressures and preserving the wetlands, waterways, and natural environment that we cherish and depend on.

Goals:

- 1 Increase community awareness and participation in resilience efforts.
- 2 Establish a clear, phased, and actionable approach for strategies.
- 3 Protect agricultural lands and natural resources.
- 4 Enhance flood-resilient infrastructure.
- 5 Promote responsible and resilient growth.
- 6 Strengthen the County's capacity to prepare for and respond to hazards.

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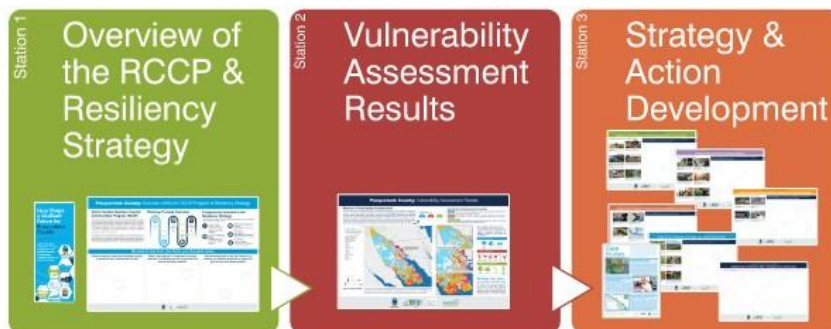
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WORKSHOP ACTIVITIES

5

At your own pace, please visit the following stations to learn about the purpose of the strategy, review the results of the vulnerability assessment, and help the County develop actions for the *Pasquotank County Resilience Strategy*.



Have a question or comment?

A member of our team would be happy to help.

PUBLIC WORKSHOP



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CAT Action Prioritization Meeting | June 4, 2026



1

AGENDA ITEMS



01

Status and Schedule

02

Actions Workshop Debrief

03

What We've Heard

04

Action Development

05

Next Steps

Great Dismal Swamp
Photo by Weston & Sampson

CAT ACTION MEETING





2

2

CAT Action Prioritization Meeting | June 4, 2026

THE RESILIENT COASTAL COMMUNITIES PROGRAM

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North Carolina
RESILIENT COASTAL COMMUNITIES PROGRAM

CAT ACTION MEETING

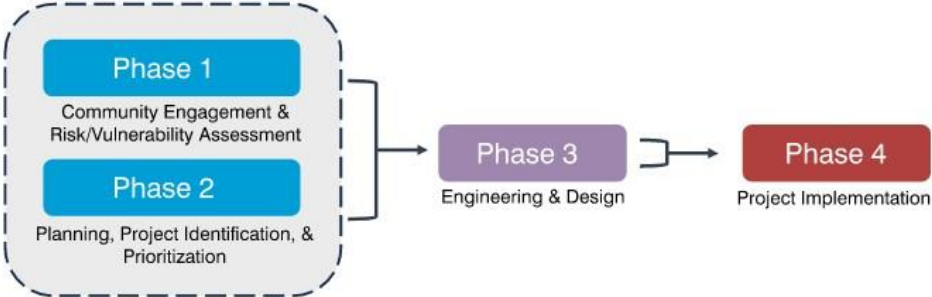


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THE RCCP

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```
graph LR; subgraph Phases1_2 [ ]; direction TB; P1[Phase 1  
Community Engagement & Risk/Vulnerability Assessment]; P2[Phase 2  
Planning, Project Identification, & Prioritization]; end; Phases1_2 --> P3[Phase 3  
Engineering & Design]; P3 --> P4[Phase 4  
Project Implementation];
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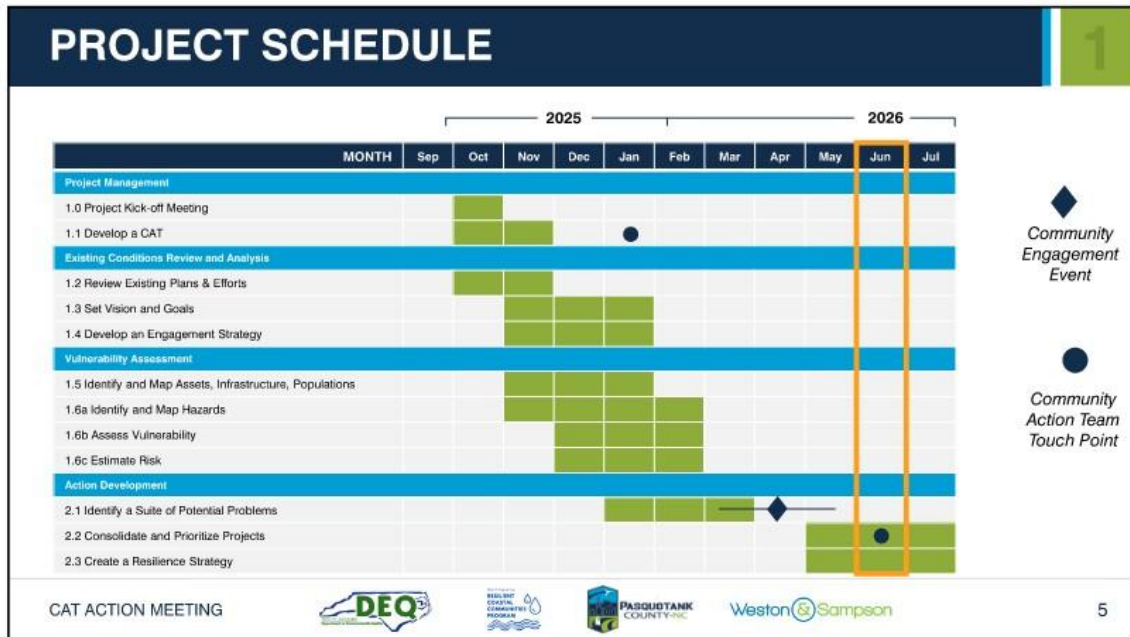
CAT ACTION MEETING



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5

ACTIONS WORKSHOP DEBRIEF

2

- Provided an overview of the RCCP and progress on the resilience plan
- Walked through vulnerability assessment maps and refined asset list.
- Identified challenges and opportunities in the County related to resilience
- Developed strategies and actions for inclusion in the plan

CAT ACTION MEETING

6

6

CAT Action Prioritization Meeting | June 4, 2026

WHAT WE'VE HEARD SO FAR

Through our Community Action Team (CAT), public input survey, virtual workshop, and pop-up event, we have gathered preliminary information on the County.



The following slides detail some of the challenges, strengths, and goals we have heard so far.

CAT ACTION MEETING

DEQ

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RESILIENCE CHALLENGES



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- Destruction of property
- Public safety during events



Agricultural Encroachment

- Development threats
- Saltwater intrusion



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- Septic usage
- Agricultural runoff and water quality issues

CAT ACTION MEETING

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RESILIENCE STRENGTHS

3



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- Natural environment
- Abundance of open spaces
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CAT ACTION MEETING




9

9

RESILIENCE GOALS

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CAT ACTION MEETING



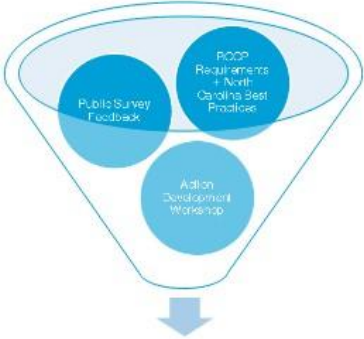

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ACTION DEVELOPMENT

4



Action Development

- **Action Development**
 - Actions compiled from workshop input, public survey, and best practices
 - Reflect community priorities + technical analysis
- **Current Focus of Today**
 - Identify gaps in existing actions
 - Strengthen areas such as policy alignment, funding opportunities, and long-term implementation
- **Prioritization**
 - Develop adaptation pathway framework for high priority actions
 - Identify high-priority actions to guide decision-making

CAT ACTION MEETING



11

11

ACTION DEVELOPMENT BUCKETS

4

Actions are categorized in the following way:

Natural Resources

Residential Adaptation

Drainage and Stormwater

Infrastructure and Capital Improvements

Water, Land, and Environment

The following slides detail some specific actions related to each of these action categories and objectives gathered from the workshop.



CAT ACTION MEETING



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12

CAT Action Prioritization Meeting | June 4, 2026

Natural Resources

The following questions address natural resource conservation and recreational access actions.

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Preliminary Natural Resources Actions

Objective 1: Reduce Flooding & Environmental Risk

- **Wetland restoration**
- **Living shorelines** (marsh planting, oyster reefs, natural buffers)
- **Promotion of nature-based solutions (NBS)**
- **Flood hazard mapping / H&H modeling** (address saltwater intrusion, prioritize agricultural lands)

This action is also addressed in the "Drainage and Stormwater" category

Objective 2: Protect Land & Ecosystems

- **Conservation regulations for farms, open space, and parks** (easements, buffers, greenways)
- **UDO updates** for resource protection
- **Prioritization conservation tool** (heirs' properties, high ecological value, flood mitigation, public access)

Objective 3: Improve Public Access & Experience

- **River access requirements** for new subdivisions near waterways
- **Knobb's Creek access + educational signage**
- **Multi-use trail planning** around major drainage corridors

Objective 4: Support Natural Resources Economy & Community

- **Eco-tourism opportunities tied into natural resources**
- **Planning strategies** that evaluate trade-offs between land conservation and tax base impacts

Let's Discuss:

- Action components
 - Key actions to prioritize
 - Missing actions from this list
- Please unmute yourself or respond in the chat.*

CAT ACTION MEETING



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Residential Adaptation

The following questions address residential adaptation actions.

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Preliminary Residential Adaptation Actions

Objective 1: Reduce Flood Risk & Strengthen Homes

- **Hazard mitigation and housing retrofit** (home elevation and floodproofing)
- **Private property Nature-based solutions (NBS) incentives** (rain gardens, swales, tree planting)
- **Incentive program for backup power** (generators, solar + storage, priority populations)

Objective 2: Guide Smart Growth & Protect Watershed

- **Land use policy and watershed protection** (limit development in sensitive areas)
- **Future land use planning and flood risk mitigation** (align density with flood risk)
- **Improved stormwater development standards** (culverts, drainage for large lots, usage of NBS)

Objective 3: Increase Awareness & Capacity

- **Public education, outreach, and risk communication** (flood risk, CRS tie-in)
- **Increase capacity for Parks & Recreation** (staffing, stewardship, access, programming)

Let's Discuss:

- Action components
 - Key actions to prioritize
 - Missing actions from this list
- Please unmute yourself or respond in the chat.

CAT ACTION MEETING



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Drainage and Stormwater

The following questions address drainage and stormwater actions.

CAT ACTION MEETING



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Preliminary Drainage and Stormwater Actions

Objective 1: Reduce Flooding & Improve Infrastructure

- Upgrade and maintain drainage systems
- Evaluate county-maintained ditch and swale systems
- Conduct inventory and assessment of culverts
- Assess drainage and channelization conditions

Objective 2: Improve Planning, Data & Technical Understanding

- Conduct targeted hydrologic and hydraulic (H&H) modeling in flood-prone areas
- Create or refine a stormwater model for the Knobb's Creek watershed
- Undertake a comprehensive drainage basin study.
- Identify and map locations with repeated flooding.

Objective 3: Prioritize Investment & Focus Areas

- Designate the Knobb's Creek watershed as a **priority** area for drainage studies, capital projects, and coordinated stormwater management efforts.

Objective 4: Increase Awareness & Community Understanding

- Develop educational materials and visual tools to help residents understand how stormwater flows through the system and the shared responsibility for drainage.

Let's Discuss:

- Action components
 - Key actions to prioritize
 - Missing actions from this list
- Please unmute yourself or respond in the chat.



CAT ACTION MEETING



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18

Infrastructure and Capital Improvements

The following questions address infrastructure and capital improvement actions.

CAT ACTION MEETING



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19

19

Preliminary Infrastructure and Capital Improvements Actions

Objective 1: Reduce Service Disruptions

- Improve redundancy and connectivity in infrastructure networks.
- Identify orphan or privately maintained roads that experience frequent flooding and pursue opportunities to upgrade them to meet state standards and transfer to NCDOT if possible.

Objective 2: Improve Data & Risk-Informed Decision-Making

- Incorporate vulnerability assessment results into capital improvement plan (CIP) process.
- Map and assess areas where septic systems are or will become vulnerable to flooding, groundwater rise, and saltwater intrusion.

Objective 3: Coordinate Infrastructure Investment

- Establish coordinated planning and implementation processes with NCDOT.

Objective 4: Protect Public Health & Long-term Resilience

- Map and assess septic system vulnerabilities

Let's Discuss:

- Action components
 - Key actions to prioritize
 - Missing actions from this list
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CAT ACTION MEETING



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Water, Land, and Environment

The following questions address water, land, and environmental actions.

CAT ACTION MEETING



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21

21

Preliminary Water, Land, And Environment Actions

Objective 1: Protect Water Quality & Ecosystem Health

- **Support restoration projects** that improve ecosystem health while reducing flood risk
- **Expand tree planning and urban forestry while discouraging clear-cutting canopy**
- **Investigate usage of nature-based solutions** that help with algal blooms and nutrient loading.

Objective 2: Strengthen Policy, Funding & Incentives

- **Update the Stormwater Management Ordinance** to reflect climate conditions
- **Create a stormwater utility** to fund drainage maintenance and improvements.
- **Advance regulations for tree preservation.**
- **Develop incentive-based buffer strategies**

Objective 3: Improve Data, Monitoring & Resilience Planning

- **Address and evaluate saltwater intrusion** into groundwater and surface water systems through modeling, monitoring, and targeted investments

Objective 4: Expand Partnerships & Regional Coordination

- **Explore creation of a regional riverkeeper position** for the Pasquotank River
- **Partner with land trusts** to protect priority open spaces and natural corridors

Let's Discuss:

- Action components
 - Key actions to prioritize
 - Missing actions from this list
- Please unmute yourself or respond in the chat.



CAT ACTION MEETING



Weston & Sampson

22

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CAT Action Prioritization Meeting | June 4, 2026

Key points of involvement for the CAT:

Capacity Needs Assessment	Goal and Objectives Setting	Climate Vulnerability Assessment	Regional Resilience Plan Development
- Respond to Questionnaire & Data Call - Attend & Participate in Knowledge Sharing Workshop - Review Capacity Building Roadmap	Attend & Participate in Goals and Objectives Workshop	- Assist with Asset Identification - Review Regional Vulnerability Assessment	- Review Priority Actions - Review final Resilience Plan

CAT ACTION MEETING    23

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NEXT STEPS

- 1 Finalize list and prioritization of actions from today's workshop and build out associated action components.
- 2 Share the comprehensive draft Resilience Strategy in the upcoming month with CAT and RCCP Coordinators.
- 3 Make edits to Resilience Strategy draft and distribute final version based on comments.

CAT ACTION MEETING    24

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CAT Action Prioritization Meeting | June 4, 2026



Thank you!

CAT ACTION MEETING



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Appendix C

Risk & Vulnerability Assessment Methodology

Introduction

This report documents Phase 1, Step 4 of the RCCP process for Pasquotank County and presents the methodology the risk and vulnerability assessment. The results of the risk and vulnerability assessment are found in Section 6 of the Pasquotank County Resilience Strategy. As part of the County's broader resilience strategy development, this assessment examines how hazards may affect critical assets, meaning facilities, infrastructure, natural systems, and other important resources that support public safety, daily operations, emergency response, and overall community function. The assessment draws on critical asset data provided by the Pasquotank County Geographic Information System (GIS) Office and desktop analysis. GIS refers to a mapping and data analysis system used to organize, visualize, and evaluate location-based information.

Critical Asset and Social Vulnerability

Critical Asset Identification

The critical assets and natural infrastructure assets evaluated in this assessment were identified using the NC Resilient Coastal Communities Planning Handbook, along with local and state data sources summarized in Table C.1. For this assessment, critical assets are defined as facilities, systems, and locations that support essential community functions and serve as community lifelines before, during, and after hazard events. These assets can include a wide range of physical, institutional, and service-based resources that are important to public safety, daily operations, emergency response, and long-term community resilience. The critical asset categories considered in this assessment include:

- **Transportation:** roadways, marinas, boat ramps, airport, bus station, fuel stations
- **Food Retail:** convenience stores, grocery stores
- **Utilities and Lifeline Services:** cell towers, substation, solid waste facility, pump stations, water lines
- **Financial and Economic Services:** credit unions, major employers, grain elevators, agricultural land in active production
- **Natural Resources:** open space and conservation lands (parks, open space, easements, burrow pit, buyout property), Managed Areas, Natural Heritage Natural Areas
- **Government Facilities:** municipal buildings, fire station, correctional institution
- **Cultural and Community:** community center, churches, schools

There were no identified medical or public health related assets within Pasquotank County, nearby assets fell within the boundaries of Elizabeth City.

Table C.1 presents the complete list of identified critical assets included in this assessment. For mapping and analysis purposes, the asset data were organized by geometry type into point, polyline, and polygon features. As described in the following section, these geometry types generally correspond to three broader asset groupings: building assets, network infrastructure, and natural infrastructure. Through this process, a total of 8,680 critical assets were mapped and evaluated. The preliminary asset inventory was shared with the Community Action Team (CAT) during the January 2026 kick-off meeting through an online ArcGIS survey, and the asset list was refined based on their feedback.

Table C.1 Asset Types for Each Asset Grouping

Asset Type	Asset Grouping		
	Built Infrastructure	Network Infrastructure	Natural Infrastructure
Transportation	6 point assets	4,251 polyline segments (roadways)	-
Food Retail	5 point assets	-	-

Utilities and Lifeline Services	13 point assets	2,675 polyline segments (water lines)	-
Financial and Economic Services	7 point assets	-	1,663 polygon assets
Natural Resources	-	-	45 polygon assets
Government Facilities	6 point assets	-	-
Cultural and Community	10 point assets	-	-

The asset inventory was developed using a combination of locally maintained datasets and state-level data sources to provide accuracy and completeness. These sources provided information on the location of built infrastructure, network infrastructure, and natural infrastructure are summarized in Table C.2 below.

Table C.2 Asset Inventory Data Sources

	Asset	Source Layer Name	Source	Year
Transportation	Bus Terminal	N/A	Google Maps ⁹	N/A
	Airport	NCDOT Division of Aviation Airports	NC OneMap ¹⁰	2024
	Fuel Station	N/A	Google Maps ¹¹	N/A
	Marina	N/A	Google Maps ¹²	N/A
	Boat Ramp	N/A	Google Maps ¹³	N/A
	Roadway	NC DOT Routes	NC DOT ¹⁴	2025
Food Retail	Dollar Store	N/A	Google Maps ¹⁵	N/A
	Grocery Store	N/A	Google Maps ¹⁶	N/A

⁹ Google. (2026). *Bus terminal locations* [Map data]. Google Maps. <https://maps.google.com/>

¹⁰ North Carolina Department of Transportation, Division of Aviation. (2024). *Airports* [GIS data]. NC OneMap. <https://www.nconemap.gov/maps/0ed5baea11d24b8394bec96dfb45f4c5>

¹¹ Google. (2026). *Fuel station locations* [Map data]. Google Maps. <https://maps.google.com/>

¹² Google. (2026). *Marina locations* [Map data]. Google Maps. <https://maps.google.com/>

¹³ Google. (2026). *Boat ramp locations* [Map data]. Google Maps. <https://maps.google.com/>

¹⁴ North Carolina Department of Transportation, GIS Unit. (2025). *NCRoutes file geodatabase* [GIS data]. <https://connect.ncdot.gov/resources/gis/Pages/GIS-Data-Layers.aspx>

¹⁵ Google. (2026). *Dollar store locations* [Map data]. Google Maps. <https://maps.google.com/>

¹⁶ Google. (2026). *Grocery store locations* [Map data]. Google Maps. <https://maps.google.com/>

	Asset	Source Layer Name	Source	Year
	Convenience Store	N/A	Google Maps ¹⁷	N/A
Utilities and Lifeline Infrastructure	Cell Tower	Cell Towers	Elizabeth City GIS Department ¹⁸	N/A
	Water Department	N/A	Google Maps ¹⁹	N/A
	Sewer Pump Station	Sewer Pump Station	Elizabeth City GIS Department ²⁰	N/A
	Utility Substation	N/A	Google Maps ²¹	N/A
	Solid Waste Site	N/A	Google Maps ²²	N/A
	Water lines	Waterlines	Pasquotank County GIS Office ²³	N/A
Financial and Economic Resources	Major Employer	N/A	Google Maps ²⁴	N/A
	Grain Elevator	N/A	Google Maps ²⁵	N/A
	Credit Union	N/A	Google Maps ²⁶	N/A
Natural Resources	Open Space and Conservation Lands	Open Space and Conservation Lands	NC Natural Heritage Program ²⁷	2025
	Managed Areas	Managed Areas (MAREA)	NC Natural Heritage Program ²⁸	2025

¹⁷ Google. (2026). *Major employer locations* [Map data based on Elizabeth City Major Area Employer List Accessible at <https://www.elizabethcitypasquotankcdc.com/why-elizabeth-city/major-area-employers/>]. Google Maps. <https://maps.google.com/>

¹⁸ Elizabeth City GIS Department. (n.d) *Cell Towers* [GIS data].

¹⁹ Google. (2026). *Water department locations* [Map data]. Google Maps. <https://maps.google.com/>

²⁰ Elizabeth City GIS Department. (n.d) *Sewer Pump Stations* [GIS data].

²¹ Google. (2026). *Utility substation locations* [Map data]. Google Maps. <https://maps.google.com/>

²² Google. (2026). *Solid waste site locations* [Map data]. Google Maps. <https://maps.google.com/>

²³ Pasquotank County GIS Office. (n.d.). *Waterlines* (FeatureServer) [GIS data]. <https://services2.arcgis.com/0sC2n3LxYOcxBOg0/ArcGIS/rest/services/rodisharge/FeatureServer>

²⁴ Google. (2026). *Grain elevator locations* [Map data]. Google Maps. <https://maps.google.com/>

²⁵ Google. (2026). *Grain elevator locations* [Map data]. Google Maps. <https://maps.google.com/>

²⁶ Google. (2026). *Credit union locations* [Map data]. Google Maps. <https://maps.google.com/>

²⁷ North Carolina Natural Heritage Program. (2025). *Managed Areas (MAREA)* [GIS data]. North Carolina Natural Heritage Program. <https://ncnhde.natureserve.org/content/data-download>

²⁸ North Carolina Natural Heritage Program. (2025). *Natural Heritage Natural Areas (NHNA)* [GIS data]. North Carolina Natural Heritage Program. <https://ncnhde.natureserve.org/content/data-download>

	Asset	Source Layer Name	Source	Year
	Natural Heritage Natural Areas	Natural Heritage Natural Areas (NHNA)	NC Natural Heritage Program ²⁹	2025
Government Facilities	Fire Station	NC Fire Stations	NC OneMap ³⁰	2025
	Federal / State Facilities	N/A	Google Maps ³¹	N/A
	Correctional Institutions	Correctional Institutions	NC OneMap ³²	2023
Cultural and Community	Churches	N/A	Google Maps ³³	N/A
	School	Public Schools	NC OneMap ³⁴	2023
	Community Center	N/A	Google Maps ³⁵	N/A

Asset Groupings

The asset inventory was organized into three primary asset groups based on function, physical characteristics, and spatial representation in the GIS analysis. Grouping assets this way enabled the use of indicators tailored to each asset type while preserving a consistent vulnerability framework across the assessment. The three asset groups are described below.



Built Infrastructure

Built infrastructure includes point-based assets such as buildings, pump stations, treatment facilities, emergency response facilities, and other fixed vertical structures that provide essential operational, protective, or service-delivery functions. Vulnerability for these assets was evaluated based on hazard exposure, consequence of disruption, and physical characteristics that may affect their performance during hazard events.

²⁹ North Carolina Natural Heritage Program. (2025). *Open Space and Conservation Lands* [GIS data]. North Carolina Natural Heritage Program. <https://ncnhd.natureserve.org/content/data-download>

³⁰ Blythe, Adam (2024). *NC Fire Stations* [GIS data]. NC OneMap. https://www.nconemap.gov/datasets/6f4fe0c55b0d4cbb92877e461d698c29_0/explore?location=36.236102%2C-76.267602%2C11

³¹ Google. (2026). *Federal and state facilities locations* [Map data]. Google Maps. <https://maps.google.com/>

³² TechniGraphics, Inc. (2023). *Correctional Institutions* [GIS data]. NC OneMap. https://www.nconemap.gov/datasets/9228018218564e70b45c385b34ca36d8_0/explore?location=35.235950%2C-79.880500%2C7

³³ Google. (2026). *Places of worship locations* [Map data]. Google Maps. <https://maps.google.com/>

³⁴ Center for Geographic Information and Analysis, Institute for Transportation Research and Education, and NC Department of Public Instruction. (2023). *Public Schools* [GIS data]. NC OneMap. https://www.nconemap.gov/datasets/dea6ff0e8b4743a0ba361e13a85a4c70_3/explore?location=35.193900%2C-79.904250%2C7

³⁵ Google. (2026). *Community center locations* [Map data]. Google Maps. <https://maps.google.com/>



Network Infrastructure

Network infrastructure includes linear assets such as roadways and water lines. The vulnerability of these assets is influenced not only by their direct exposure to hazards, but also by the connectivity and continuity of service they provide within larger transportation and utility systems.



Natural Infrastructure

Natural infrastructure includes polygon-based assets such as parks, agricultural lands, and natural heritage areas that provide ecological functions and resilience benefits including flood storage, erosion reduction, habitat support, and water quality improvement. Vulnerability for these assets was evaluated based on ecological sensitivity, exposure to identified hazards, and the ability of the natural system to absorb or adapt to changing conditions.

Social Vulnerability

Social vulnerability is an important component of understanding Pasquotank County's overall vulnerability to climate impacts and natural hazards because it helps identify populations that may have greater difficulty preparing for, responding to, and recovering from disruptive events. In this context, social vulnerability refers to demographic, social, economic, and housing-related characteristics that can influence how severely people are affected by hazards such as flooding, storms, and other climate-related impacts. These factors do not cause hazards themselves, but they can increase the likelihood that certain populations will experience greater harm or face additional barriers during recovery. For example, households with lower incomes may have fewer financial resources available for evacuation, home repairs, temporary housing, or other recovery needs following a disaster.

For this assessment, social vulnerability was evaluated using the Center for Disease Control and Prevention's Social Vulnerability Index (CDC SVI), which compiles U.S. Census data at the census tract level to measure factors that may affect a community's ability to respond to and recover from hazards. The SVI is based on 16 social variables, which are summarized in Table C.3, and includes indicators related to socioeconomic conditions, household composition, disability, minority status, language, housing type, and transportation access. In this analysis, the overall SVI percentile score was used as an indicator of sensitivity. Percentile scores range from 0 to 1, with higher values indicating relatively greater social vulnerability and lower values indicating relatively lower vulnerability compared to other census tracts.

Table C.3 2022 Social Vulnerability Index (SVI) Themes and Factors³⁶

Theme	Factors
Socioeconomic Status	Below 150% Poverty
	Unemployed
	Housing cost burdened
	No high school diploma
	No health insurance
Household characteristics	Aged 65 or older
	Age 17 or younger

³⁶ Agency for Toxic Substances and Disease Registry. (2024). *CDC/ATSDR social vulnerability index (SVI) 2022 documentation*. U.S. Centers for Disease Control and Prevention. <https://www.atsdr.cdc.gov/place-health/media/pdfs/2024/10/SVI2022Documentation.pdf>

	Civilian with a disability
	Single-parent household
	English language proficiency
Racial & Ethnic Minority Status	Hispanic or Latino, Black or African American, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, Two or more races, Other races
Housing Type & Transportation	Multi-Unit Structures
	Mobile Homes
	Crowding
	No Vehicle
	Group Quarters

Hazard Identification and Extents

To better understand potential climate hazards that the County faces, an existing conditions analysis was conducted in the beginning steps of Phase 1. The existing conditions analysis identified relevant reports and assessments that identified potential hazards and resilience strategies for Pasquotank County and the Albemarle region.

The NC Resilience Exchange publishes climate projections and observations from climate models for North Carolina municipalities. The following historical flood events and future projections by 2060 are expected in Table C.4. These values were not directly integrated into the assessment, but provide important contextual information on historical and projected flood conditions.

Table C.4 North Carolina Resilience Exchange Historical and Projected Flood Data

Hazard	Historical (1983 to 2014)	Best Case Scenario (By the 2060s)	Worst Case Scenario By the 2060s
Heavy Rain – Days with Precipitation of 2 or more inches	15 days	19 days	20 days
Sea Level Rise	0.5 feet	1.1 feet	1.4 feet
Sunny Day Flooding	28 days	85 days per year	95 days per year

The climate hazards evaluated in this analysis were identified in the 2020 *Albemarle Regional Hazard Mitigation Plan*³⁷ and are required by NC RCCP as part of the vulnerability assessment process. These hazards include historical flooding, current coastal and riverine flooding, storm surge, and projected future sea level rise (tidal flooding) and are shared in Table C.5. All identified hazards were mapped using ArcGIS Pro and are included in the appendix of this document.

³⁷ Albemarle Region, North Carolina. (2025). Albemarle Regional Hazard Mitigation Plan.

https://static1.squarespace.com/static/5b0584b6aa49a1a281fb3205/t/60c25c6c56a8b7130b6a53c6/1623350410080/Albemarle_Regional_HMP_Complete_Draft.pdf

Table C.5 Hazard Identification & Sources

Hazard	Dataset
Present / Historical Riverine Flooding	NC FRIS ³⁸
Projected Category 2 Hurricane Storm Surge (SLOSH) Maximum of Maximums (MOM)	National Storm Surge Hazard Maps ³⁹
Present / Projected Tidal Flooding	NOAA Sea Level Rise ⁴⁰

Flooding in Pasquotank County, particularly in coastal sound-side areas, is strongly influenced by wind-driven water movement and tidal conditions, which can exacerbate water levels beyond what is captured in standard geospatial flood datasets. In low-lying coastal communities with extended wind fetch, the unobstructed distance wind travels, sustained winds can elevate local marine water levels even under typical tidal conditions, increasing flood risk.⁴¹ While SLOSH Maximum of Maximums (MOM) data capture hurricane-driven storm surge resulting from extreme wind forcing, they do not account for non-storm wind-tide flooding, day-to-day tidal variability, or compound flooding processes. As a result, wind-driven and tidal flooding in sound-side areas that occurs outside of hurricane events may not be fully represented in SLOSH-based geospatial datasets.

Vulnerability Assessment

Methodology Equation

The vulnerability assessment evaluated the relative vulnerability of critical assets and natural infrastructure within Pasquotank County to identify climate hazards. The methodology was developed as a planning-level screening tool to support comparison across a large and diverse asset inventory and to help identify priorities for future investigation, mitigation, and resilience investment.

Vulnerability was assessed using the framework outlined in the NC RCCP Planning Handbook:

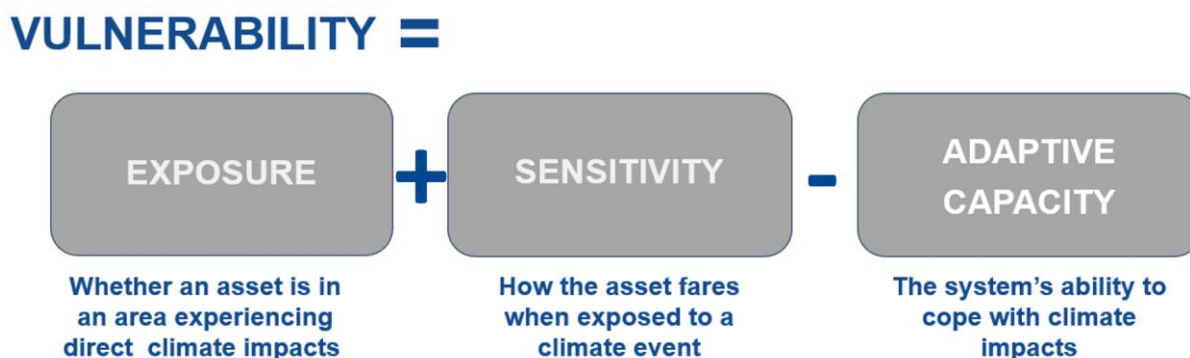


Figure C.1 Vulnerability Equation used in the Assessment

In this framework, exposure reflects whether an asset is located within the extent of a mapped hazard, sensitivity reflects how severely the asset or the people it serves may be affected if exposed, and adaptive capacity reflects

38 North Carolina Floodplain Information Risk System (FRIS). North Carolina Department of Public Safety, North Carolina Emergency Management. Available at: <https://fris.nc.gov/>

39 National Storm Surge Hazard Maps. National Hurricane Center (NHC), National Oceanic and Atmospheric Administration (NOAA). Available at: <https://www.nhc.noaa.gov/nationalsurge/>

40 NOAA Sea Level Rise Viewer. National Oceanic and Atmospheric Administration (NOAA), Office for Coastal Management. Available at: <https://coast.noaa.gov/slr/>

⁴¹ Thelen, T., Anarde, K., Dietrich, J. C., & Hino, M. (2024). *Wind and rain compound with tides to cause frequent and unexpected coastal floods*. Water Research, 266, 122339. <https://doi.org/10.1016/j.watres.2024.122339>

the asset’s ability to withstand, absorb, or recover from hazard impacts. Because this is a screening-level assessment, results are intended to support prioritization and planning rather than site-specific engineering or design decisions.

This methodology is intended as a screening-level assessment and relies on the best available countywide GIS datasets at the time of analysis. As a result, scores are influenced by data resolution, asset representation type, and the availability of indicator data for different asset classes. The results should therefore be used to compare relative vulnerability across the inventory and to identify planning priorities, but not as a substitute for site-specific engineering analysis, operational assessment, or design.

Scoring Indicators

Not all sensitivity and adaptive capacity indicators were applied uniformly across all asset groups. Indicators were selected based on the functional characteristics of each asset type, the relevance of the dataset to that asset class, and the planning-level purpose of the assessment. For example, Social Vulnerability Index data were applied to built infrastructure and network infrastructure since service interruptions in these systems can directly affect surrounding populations. Criticality was applied to FEMA lifeline-related built assets because disruption of these facilities can have outsized consequences during a hazard event. Roadway material was not included because consistent material data were not available across the transportation network and roadway vulnerability was better represented through exposure and network role at this level of analysis. The presence of wetlands and findings from the Biodiversity and Habitat Assessment were evaluated exclusively for natural infrastructure assets, as these indicators primarily influence natural systems rather than human-made or human-utilized environments.

Exposure Scoring Indicators

Exposure scoring indicators were applied consistently across all identified hazards for every asset grouping, including built, network, and natural infrastructure. These are explained below in Table C.6.

Table C.6 Exposure Scoring Indicators and Descriptions

	USE	INDICATOR	DESCRIPTION
EXPOSURE	  	Present / Historical Riverine Flooding	To assess historical and present-day flood exposure, the 1% annual chance (100-year) and 0.2% annual chance (500-year) flood hazard layers from the North Carolina Flood Risk Information System (FRIS) were used. These layers incorporate Federal Emergency Management Agency (FEMA) flood hazard data. Exposure was evaluated differently based on asset type. For built assets represented as points, a 100-foot buffer was applied, and exposure was determined based on whether the buffered area intersected the flood hazard layer. This is because a riparian or floodplain buffers typically varies from 50 to 100 feet for development areas.⁴² For linear and polygon features, such as network infrastructure and natural infrastructure, exposure was determined based on direct spatial intersection with the flood hazard layer.

	  	Projected Category 2 Hurricane Storm Surge	To evaluate potential flooding from hurricane storm surge, the Category 2 storm scenario was selected based on the County's historical record, as the most severe hurricane to impact Pasquotank County was Category 2 in 2014.⁴³ Flood depth data from this Category 2 storm scenario were used to assess the severity of inundation presently and in the future. Flood exposure was categorized using depth benchmarks: "unlikely" (no significant inundation), less than 3 feet, and greater than 3 feet, allowing differentiation between minor and more severe flooding impacts under this storm scenario. Exposure was evaluated differently based on asset type. For built assets represented as points, a 100-foot buffer was applied, and exposure was determined based on whether the buffered area intersected the storm surge layer. This is because a riparian or floodplain buffers typically varies from 50 to 100 feet for development.⁴⁴ For linear and polygon features, such as network infrastructure and natural infrastructure, exposure was determined based on direct spatial intersection with the storm surge layer.
	  	Present / Projected Tidal Flooding	To assess potential future flooding from sea level rise (SLR), this analysis incorporated both 0-foot and 2-foot SLR projections from NOAA. The 0-foot scenario reflects present-day conditions at Mean Higher High Water (MHHW) and received the highest score because it represents the most immediate and pressing flooding risk. The 2-foot scenario was used as a near-term projection to illustrate potential increases in water levels. For Pasquotank County, NOAA-based projections for the 2030–2060 timeframe suggest an SLR of approximately 1.1–1.4 feet, reflecting a range of mid-range scenarios from NOAA's 2022 SLR projections.⁴⁵ Exposure was evaluated differently based on asset type. For built assets represented as points, a 100-foot buffer was applied, and exposure was determined based on whether the buffered area intersected the sea level rise layers. This is because a riparian or floodplain buffers typically varies from 50 to 100 feet for development.⁴⁶ For linear and polygon features, such as network infrastructure and natural infrastructure, exposure was determined based on direct spatial intersection with the sea level rise layers.

⁴³ <https://coast.noaa.gov/hurricanes/#map=4/32/-80>

⁴⁴ [NPDES: Stormwater Best Management Practices, Riparian/Forested Buffer](#)

⁴⁵ [Climate Projections | NC Resilience Exchange](#)

⁴⁶ [NPDES: Stormwater Best Management Practices, Riparian/Forested Buffer](#)

Sensitivity Scoring Indicators

Sensitivity scoring indicators varied for each asset grouping (built infrastructure, network infrastructure, and natural infrastructure) as shown in the use column. These indicators and their descriptions are shown below in Table C.7.

Table C.7 Sensitivity Scoring Indicators and Descriptions

	USE	INDICATOR	DESCRIPTION
SENSITIVITY	  	Experienced Historic Flooding from Survey	To identify frequently flooded areas that may not appear in the modeled flood hazard layers used in the exposure component of this climate vulnerability assessment, a community survey was developed to gather local, on-the-ground insight. Residents were asked to report locations that flood often, with most responses referencing roadways, which became the focus of this indicator. While some additional locations were shared, they did not overlap with built assets or natural resources that were not already identified as highly vulnerable. Roads that were reported as having flooded once were assigned a baseline score, while locations with multiple independent reports were classified as flood hotspots and given a higher score.
	  	Social Vulnerability	Social vulnerability was included as a sensitivity indicator using the CDC/ATSDR Social Vulnerability Index (SVI). The SVI uses 16 ACS variables grouped into four themes to identify communities that may face greater challenges before, during, or after disasters. For this assessment, we applied the “RPL_Themes” percentile scores, which rank each area’s relative level of social vulnerability, with higher percentiles indicating higher vulnerability. These scores were used only for built infrastructure and network infrastructure, since these assets are directly tied to human populations. Natural infrastructure was assessed separately using wildlife and biodiversity indicators, which better reflect ecological sensitivity.
	  	Criticality	Criticality considers how essential an asset is to maintaining community safety, daily functioning, and emergency response. Highly critical assets are those whose damage or disruption would create significant operational, environmental, or community impacts. This includes facilities and services such as wastewater treatment plants, emergency response stations, major utilities, and other systems that must remain functional during a crisis. In alignment with FEMA’s Community Lifelines framework, any asset that falls within a Community Lifeline category, such as Safety and Security, Communications, Transportation, Health and Medical, Energy, Water and Wastewater, and Hazardous Materials, was automatically considered highly critical. ⁴⁷ These assets are

⁴⁷ https://www.fema.gov/sites/default/files/documents/fema_lifelines-toolkit-v2.1_2023.pdf

		foundational to stabilizing a community during disasters and are therefore prioritized when assessing sensitivity.
	Pipe Diameter	The diameter of a water distribution main is a critical factor in determining its sensitivity during hazard events because larger-diameter pipes typically function as primary distribution or transmission mains that carry the highest volumes of water to the largest service areas. The U.S. Army Corps of Engineers notes that distribution mains commonly range from 6 to 48 inches in diameter.⁴⁸ Larger pipes transport greater flows at acceptable velocities (5–10 feet per second), which is essential for maintaining system pressure and delivering water to major nodes, pump stations, storage tanks, and high-demand areas. Because these large mains serve more customers and carry a significant share of the system’s total flow, damage to a large-diameter main results in broader service disruption than damage to smaller, localized pipes. From a vulnerability perspective, this means that large-diameter mains represent higher-criticality infrastructure and are therefore weighted as more sensitive in this climate vulnerability assessment.
	Road Type	Road functional classification influences sensitivity because higher-order routes carry more traffic, serve larger travel areas, and play a more important role in regional mobility. According to Federal Highway Administration (FHWA), roads that support higher-volume, longer-distance travel have great importance during disruptions because they are designed and constructed to maximize their mobility functionality.⁴⁹ Because higher-class roads move more travelers and serve regional needs, disruptions to these facilities have broader impacts and therefore score as more sensitive in this climate vulnerability assessment. In Pasquotank County, this translates to the following route classes: • Class 5 – Non-System Roads: serve smaller areas with lower speeds and volumes. • Class 4 & 80 – Secondary and Ramp Facilities: provide broader connectivity and carry more vehicles than local facilities. • Class 2 & 3 – U.S. and N.C. Routes: support higher mobility, carry the greatest volumes, and are essential for emergency access and evacuation.
	Biodiversity / Wildlife Habitat Assessment	The Biodiversity and Habitat Assessment, developed by the North Carolina Natural Heritage Program, identifies, evaluates, and prioritizes the state’s most significant natural resources to support healthy and sustainable ecosystems. The dataset maps conservation priorities across North Carolina by assessing the biodiversity of aquatic and terrestrial species and communities, the

⁴⁸ [EM_1110-3-164.pdf](#)

⁴⁹ [Highway Functional Classification Concepts, Criteria and Procedures 2023 Edition](#)

value of large connected landscapes such as core wildlife habitats and habitat connectors, and the importance of ecosystem-supporting features like riparian buffers and wetlands. Each natural resource input, ranging from rare species occurrences to important aquatic habitats, wetlands, and core wildlife areas, is assigned a conservation value based on rarity, ecological function, and data quality, and combined into a statewide prioritization scale from 1 (moderate value) to 10 (maximum value). This tool is widely used by local governments, state agencies, regional councils, funding programs, conservation organizations, and the private sector to inform land use planning, conservation decisions, mitigation strategies, and transportation project development. It provides a comprehensive, science-based foundation for understanding the biodiversity and wildlife importance of natural infrastructure across the state.

In Pasquotank County, this translates to the following conservation buckets:

- **Conservation Value of 0** – areas with no or low identified conservation priority
- **Conservation Value 1–4** – areas with moderate conservation priority
- **Conservation Value ≥ 5** – areas with high to maximum conservation priority

Adaptive Capacity Scoring Indicators

Adaptive Capacity scoring indicators varied for each asset grouping (built infrastructure, network infrastructure, and natural infrastructure) as shown in the use column. These indicators and their descriptions are shown below in Table C.8.

Table C.8 Adaptive Capacity Scoring Indicators and Descriptions

	USE	INDICATOR	DESCRIPTION
ADAPTIVE CAPACITY	  	Redundancy	Redundancy refers to the availability of backup systems and facilities that allow an asset or service to continue functioning if an asset fails. Assets with high redundancy, meaning they have are less vulnerable because they can rely on substitute pathways or components during disruptions. Low redundancy increases the likelihood that a single failure will cause significant service impacts, thus decreasing adaptive capacity. Assets designated as lifelines under FEMA's criteria are used for this indicator.⁵⁰ Cultural assets, while important, are unique in nature and do not function as quantifiable lifelines, and therefore cannot be evaluated using redundancy-based metrics. In Pasquotank County, this translates to the following redundancy scores: • No other assets of the same type — lowest adaptive capacity due to no available backup • One other asset of the same type — moderate redundancy and moderate adaptive capacity • More than one other asset of the same type — highest redundancy and highest adaptive capacity
	  	Building Age	Building age serves as an adaptive capacity indicator for built infrastructure because it reflects how well an asset is expected to perform under current and future hazard conditions. Older assets often have diminished adaptive capacity because they were constructed under outdated design standards, may have experienced material deterioration, and frequently lack modern engineering features intended to reduce flood or hazard risk. Newer assets, by contrast, are typically built with improved materials, updated construction methods, and in compliance with more current building codes and hazard-mitigation requirements. Research from the Congressional Research Service notes that the structural integrity of buildings, and whether they were built under modern, hazard-resistant codes, significantly influences how severely they are impacted during disasters, underscoring that older buildings tend to be more vulnerable.⁵¹ For this assessment, 1976 is used as the defining threshold because Pasquotank County adopted its first floodplain ordinance in March of that year.⁵² Assets built before 1976 may not incorporate foundational floodplain management standards and therefore exhibit lower adaptive capacity. Assets built after 1976 are more likely to include basic

⁵⁰ https://www.fema.gov/sites/default/files/documents/fema_lifelines-toolkit-v2.1_2023.pdf

⁵¹ [R47612.19.pdf](#)

⁵² [FLOOD DAMAGE PREVENTION ORDINANCE](#)

		measures intended to reduce flood risk, giving them a higher adaptive capacity score.
  	Pipe Material	For network infrastructure, specifically for water distribution mains, pipe material is used as an adaptive capacity indicator because different materials have distinct durability and failure characteristics during hazard events. According to the U.S. Army Corps of Engineers' <i>Water Supply, Water Distribution Systems</i> manual (EM 1110-3-164), pipe materials differ in structural strength, pressure tolerance, and susceptibility to deterioration, which directly affects system reliability under stress.⁵³ In this climate vulnerability assessment, Ductile Iron is considered to have the highest adaptive capacity because it is the strongest and most resilient material. PVC offers moderate adaptive capacity, as it is corrosion-resistant but less structurally robust. Cast Iron Pipe (CIP), one of the oldest materials in the system, is the most brittle and most prone to cracking or failure, giving it the lowest adaptive capacity.
  	Soil Drainage	Soil drainage indicates how quickly water can infiltrate or move through the ground. Poorly drained soils increase flood risk and reduce the ability of natural infrastructure to manage heavy rainfall, while moderately well-drained and well-drained soils improve infiltration and overall adaptive capacity. Soil drainage classifications for this climate vulnerability assessment come from the United States Department of Conservation (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, which assigns drainage classes based on natural water-movement rates. For roadway-related infrastructure, well-drained soils help maintain road stability and function during storm events. Soil drainage was not applied to water distribution mains, as pipe performance was associated with pipe material. To determine the majority soil-drainage class for each asset, a 50-foot buffer was applied around each roadway segment, and the full area was analyzed for natural infrastructure. The drainage class representing the largest percentage of the buffered or polygon area was assigned as the asset's soil-drainage scoring category.

⁵³ [EM_1110-3-164.pdf](#)

		Presence of Wetlands	Wetlands increase the adaptive capacity of natural infrastructure because they naturally store, slow, and absorb floodwaters, reducing peak flows and mitigating impacts during heavy precipitation or storm events. The Fifth National Climate Assessment (NCA5, 2023) highlights that wetlands and other natural ecosystems play a critical role in buffering communities from climate-driven flooding by absorbing excess water, reducing runoff, and maintaining ecological stability under future climate conditions. For the purposes of this assessment, natural infrastructure areas that contain wetlands receive a higher adaptive capacity score because these ecosystems help dissipate flood energy, retain stormwater, and support long-term resilience as climate change increases the frequency and intensity of flood events. In Pasquotank County, this translates to the following adaptive capacity scores: • Wetlands present (≥50% of area): Highest adaptive capacity • Wetlands present (<50% of area): Moderate adaptive capacity • No wetlands present: Lowest adaptive capacity

Point-Based Scoring Framework

The vulnerability assessment applied a 0 to 2 scoring scale for each indicator. Using the vulnerability scoring equation shown in Figure 1, exposure, sensitivity, and adaptive capacity were combined to calculate the overall vulnerability of each asset. Assets exposed to any form of flooding are more likely to be classified as vulnerable. These indicators and how they are valued are shown below in Table C.9.

Table C.9 Point Values for Scoring Indicators

		Point Values			Asset Type
Indicator		0	1	2	
EXPOSURE	Flood Risk Information System (FRIS) for NC (Present)	Not Exposed	0.2% Exposure	1% Exposure	All
	Category 2 Storm Surge	Unlikely	Less than 3 feet	Greater than or equal to 3 feet	All
	Future Tidal Flooding	Unlikely	Exposed to 2 ft of SLR	Exposed to MHHW Now	All

SENSITIVITY	Experience Historical Flooding from Public Survey	No recorded historic flooding.	Historic flooding documented on roadway once.	Historic flooding documented more than one time on same roadway.	Network Infrastructure (Roadways)
	SVI by Census Tract (RPL_Themes (percentile ranking))	<0.25	0.25-0.50	>0.50	Built Infrastructure, Network Infrastructure
	Criticality (consequence of failure)	Not critical during hazard.	Somewhat critical during hazard.	Critical during hazard event.	Built Infrastructure
	Pipe Diameter	Local Distribution: Pipe Diameter is <8"	Distribution Systems: Diameter is 8-12"	Main Distribution System: Pipe Diameter is >12"	Network Infrastructure (Water lines)
	Road Type	Road is Minor Collector (Class 5)	Road is Major Collector (Class 4 and 80)	Road is Principal or Minor Arterial (Class 2 and 3)	Network Infrastructure (Roadways)
	Biodiversity/Wildlife Habitat Assessment	Conservation Value 0	Conservation Value 1-4	Conservation Value Greater than or Equal to 5	Natural Infrastructure
ADAPTIVE CAPACITY	Redundancy of Asset	No other assets	1 other asset	Greater than 1 other asset	Built Infrastructure [ONLY Critical Lifeline Assets (FEMA) i.e. fire dept, etc]
	Building Age	Built Before 1976 / Unknown		Built After 1976	Built Infrastructure
	Pipe Material	Cast In Place / Unknown	PVC	DUCT (Ductile Iron)	Network Infrastructure (Water lines)
	Soil Drainage	Majority is Poorly Drained Soils	Majority is Moderately Well Drained	Majority is Well Drained	Natural Infrastructure, Network Infrastructure (Roadways)
	Presence of Wetlands	None Within Asset	Less than 50%	More than 50%	Natural Infrastructure

Vulnerability scoring results can be found in Section 6 of the Pasquotank County Resilience Strategy. Final vulnerability scores were grouped into four categories: Low, Moderate, High, and Very High Vulnerability. These categories were used to summarize the relative distribution of vulnerability across the asset inventory and to identify assets that may warrant additional evaluation, prioritization, or resilience investment. Point thresholds were established to achieve a balanced score distribution. The approach intentionally restricts the Very High Vulnerability category to only the highest-scoring assets, with most assets grouped within the Moderate Vulnerability classification. Some assets produced negative scores, with values as low as -2. To account for these negative values, a lower bound of zero was applied to the dataset, preventing negative values in the final output.

Risk Assessment

Risk estimation is a critical component to using vulnerability assessment results and making informed decisions about asset management and project prioritization. For this assessment, parcel value data were used as a proxy to represent the relative risk associated with each built infrastructure and natural infrastructure asset. After assigning vulnerability scores to each of the critical assets, the financial risk for built infrastructure and natural infrastructure was calculated using the North Carolina Parcel dataset. The total parcel value (PRTOTAL) includes the appraised value for land (LANDVAL) and appraised value for improvements (IMPROVAL).⁵⁴

For network infrastructure, unit-based replacement cost estimates were applied to both pipes and roadways. Replacement cost was calculated by multiplying the geospatially measured length of each pipe or road segment by the corresponding rate provided in Table C.10 or Table C.11. Because Pasquotank County does not maintain its own standardized replacement rates, metrics from the City of Raleigh were used. Diameter-specific water line replacement rates were taken from Raleigh’s *Comprehensive Guide for Development Fees (July 1, 2025–June 30, 2026)*⁵⁵, which provides renewal benchmarks based on pipe size and expected service life. For each water main segment, the corresponding rate from Table C.10 was applied. When a pipe diameter did not directly match a listed category, the next highest diameter value was used to estimate replacement cost.

Table C.10 Water main pipe replacement per foot

Water Main Diameter	Total Reimbursement (per linear foot)
6-inch	\$160.00
8-inch	\$166.00
12-inch	\$204.00
16-inch	\$275.00
24- inch	\$289.00

For roadway assets, replacement cost estimates were derived using Federal Highway Administration (FHWA) Highway Statistics⁵⁶. From the 2024 dataset, roadway reconstruction costs were calculated by dividing the total reported reconstruction expenditures by the number of miles reconstructed, producing an approximate cost-per-mile value by route classification. For rural roadways, the resulting cost rates shown in Table C.11 were applied in this assessment.

⁵⁴ <https://www.nconemap.gov/pages/parcels>
⁵⁵ [Development Fee Guide - July 1, 2025 to June 30, 2026](#)
⁵⁶ [Table FA-10 - Policy | Federal Highway Administration](#)

Table C.11 Roadway reconstruction cost per mile

Route Class	Route Type	Total Cost (per mile)
2	Minor Arterial	\$934,737
3	Major Collector	\$738,378
4	Minor Collector	\$520,896
5	Local	\$3,249,647
80	Heavy-Traffic Route (Other)	\$463,162

Risk assessment results can be found in Section 6 of the Pasquotank County Resilience Strategy. The risk assessment provided an outlook on the risk value of highly vulnerable assets and of all assets regardless of vulnerability.

Limitations

The valuation of these assets is dynamic and may change over time because parcel data is based on the appraised value of land and improvements, rather than the specific value of the infrastructure located on that parcel. Appraisals typically reflect market conditions, land use, building characteristics, and economic trends, not the replacement or functional value of individual asset types such as pump stations or cultural facilities. As a result, parcel-level financial data provides only an indirect proxy for asset value and should not be interpreted as a true measure of capital investment or replacement cost.

Furthermore, unit-cost estimates for infrastructure replacement including water lines and roadways are affected by a wide range of external factors. Replacement and construction costs can vary significantly based on site-specific constraints such as utility conflicts and soil conditions, market fluctuations in labor and materials, regional contractor availability, and the logistical challenges of working in rural versus urban environments. Costs may also differ depending on whether replacement occurs during planned capital projects or emergency repairs.

Because of these variables, the values used in this assessment represent generalized planning-level estimates rather than precise cost projections. They provide a consistent basis for comparison across assets but may differ from actual construction or replacement costs incurred in specific projects.

Appendix

D

Risk & Vulnerability Assessment Results

Table D.1. Built Infrastructure Vulnerability Scoring

E = Exposure | S = Sensitivity | A = Adaptive Capacity | V = Vulnerability

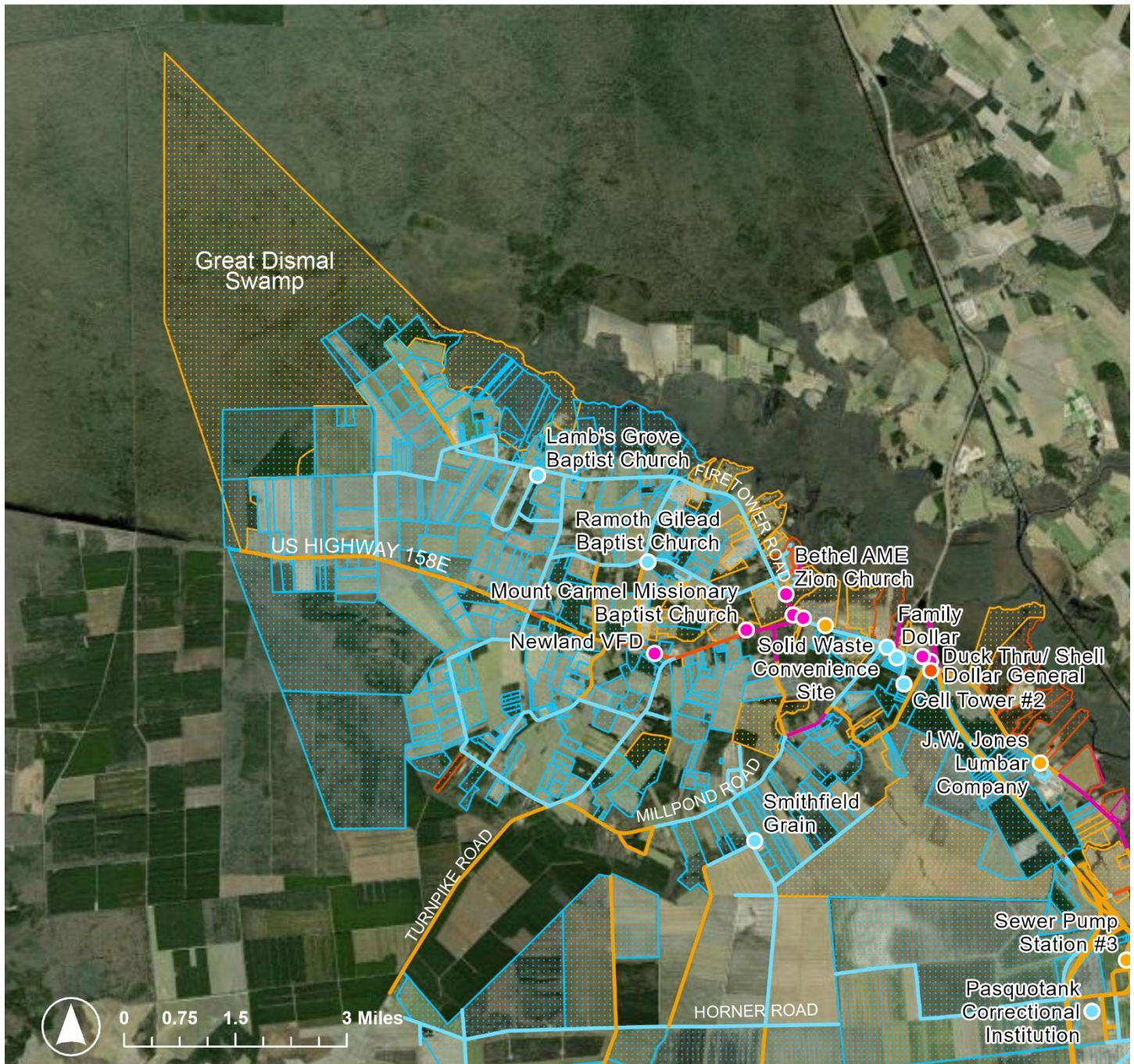
ID	Asset Name	Asset Category	E	S	A	V	RANK	VALUE
1	Greyhound Bus Station	Transportation	0	3	0	3	Moderate	\$ 235,200.00
2	Cell Tower #1	Utilities and Lifeline Infrastructure	0	4	2	2	Low	\$ 3,800.00
3	Cell Tower #2	Utilities and Lifeline Infrastructure	0	3	2	1	Low	\$ 110,100.00
4	Cell Tower #3	Utilities and Lifeline Infrastructure	5	3	2	6	High	\$ 57,900.00
5	Cell Tower #4	Utilities and Lifeline Infrastructure	5	4	2	7	Very High	\$ 4,500.00
6	Cell Tower #5	Utilities and Lifeline Infrastructure	5	3	2	6	High	\$ 28,800.00
7	Church of Christ Bayside	Cultural and Community	4	2	0	6	High	\$ 144,300.00
8	EC/Pasq Regional Airport	Transportation	2	3	0	5	High	\$ 129,220,100.00
9	Northside Elem	Cultural and Community	1	3	0	4	Moderate	\$ 11,235,700.00
10	Pasquotank HS	Cultural and Community	2	3	2	3	Moderate	\$ 19,058,200.00
11	VFD Soundneck SubStation	Utilities and Lifeline Infrastructure	5	3	2	6	High	\$ 5,700.00
12	Weeksville Elem	Cultural and Community	4	2	0	6	High	\$ 3,704,500.00
13	Weeksville VFD	Government Facilities	5	3	2	6	High	\$ 40,900.00
14	Pasquotank Water Dept	Utilities and Lifeline Infrastructure	1	3	2	2	Low	\$ 1,491,500.00
15	NC DOT	Transportation	1	2	2	1	Low	\$ 1,788,300.00
16	Pasquotank Correctional Institution	Government Facilities	0	2	2	0	Low	\$ 30,577,600.00
17	Providence VFD	Government Facilities	0	4	2	2	Low	\$ 477,900.00
18	Newland VFD	Government Facilities	3	3	2	4	Moderate	\$ 106,000.00
19	Citgo	Transportation	1	4	2	3	Moderate	\$ 354,000.00
20	Telephonics Corporation	Financial and Economic Resources	2	2	0	4	Moderate	\$ 48,300.00
21	Moneysworth	Financial and Economic Resources	0	3	0	3	Moderate	\$ 2,260,000.00
22	TCOM	Financial and Economic Resources	2	2	0	4	Moderate	\$ 251,400.00
23	J.W. Jones Lumbar Company	Financial and Economic Resources	0	3	0	3	Moderate	\$ 2,890,900.00
24	Sewer Pump Station #1	Utilities and Lifeline Infrastructure	2	3	0	5	High	\$ 105,590.00
25	Sewer Pump Station #2	Utilities and Lifeline Infrastructure	2	3	0	5	High	\$ 25,365.00
26	Sewer Pump Station #3	Utilities and Lifeline Infrastructure	0	4	0	4	Moderate	\$ 290,800.00
27	Sewer Pump Station #4	Utilities and Lifeline Infrastructure	2	3	0	5	High	\$131,140.00
28	US Coast Guard	Government Facilities	3	3	0	6	High	\$ 129,220,100.00
29	Ramoth Gilead Baptist Church	Cultural and Community	0	2	0	2	Low	\$ 658,000.00
30	Bethel AME Zion Church	Cultural and Community	5	2	0	7	Very High	\$ 1,600.00
31	Mount Carmel Missionary Baptist Church	Cultural and Community	4	2	0	6	High	-
32	Lamb's Grove Baptist Church	Cultural and Community	0	2	0	2	Low	\$ 221,600.00
33	Newland United Methodist Church	Cultural and Community	5	2	0	7	Very High	\$ 74,300.00

ID	Asset Name	Asset Category	E	S	A	V	RANK	VALUE
34	Duck Thru/ Shell	Transportation	3	4	2	5	High	\$ 1,922,600.00
35	Family Dollar	Food Retail	3	3	2	4	Moderate	\$ 58,900.00
36	Dollar General	Food Retail	2	3	2	3	Moderate	\$ 519,800.00
37	Newland Ruritan Building	Cultural and Community Utilities and Lifeline Infrastructure	0	2	0	2	Low	\$ 83,800.00
38	Utility Substation	Utilities and Lifeline Infrastructure	3	1	0	4	Moderate	\$ 19,600.00
39	Solid Waste Convenience Site	Utilities and Lifeline Infrastructure	0	3	0	3	Moderate	\$ 75,300.00
40	Parkway AG Supply	Financial and Economic Resources	0	2	0	2	Low	\$ 237,800.00
41	Smithfield Grain	Financial and Economic Resources	0	2	0	2	Low	\$ 2,320,900.00
42	Weeksville Grocery	Food Retail	5	2	2	5	High	\$ 76,400.00
43	Meadstown Produce	Food Retail	1	2	2	1	Low	\$ 74,400.00
44	Mr.p's Food Mart	Food Retail	1	3	2	2	Low	\$ 1,321,600.00
45	Frog Island Marina	Transportation	6	2	0	8	Very High	\$ 167,700.00
46	Halls Creek Ramp	Transportation	2	2	0	4	Moderate	\$ 276,600.00
47	Navy Federal Credit Union	Financial and Economic Resources	3	2	0	5	High	\$ 182,100.00

Natural Infrastructure and Network Infrastructure assets, as defined in Appendix B and Section 6 of the Pasquotank County Resilience Strategy, were also evaluated. Due to the number and unique characteristics of these asset types, they are not included in this section of the Appendix. Results for these assets are available in the comprehensive Vulnerability Assessment Matrix

Vulnerability Assessment Results: Asset Inventory Scored

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- ▨ Low
- ▨ Moderate
- ▨ High
- ▨ Very High



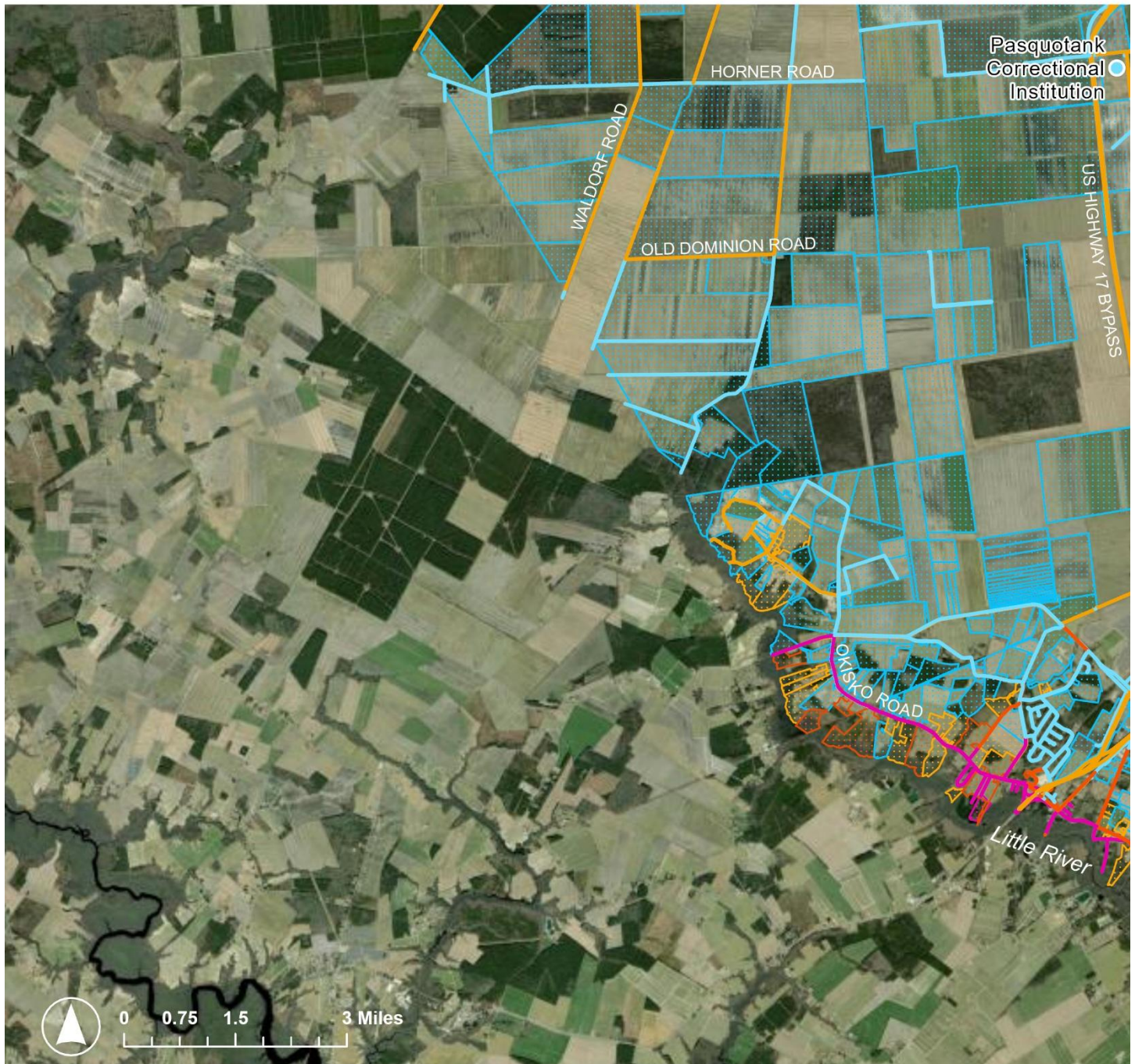
Weston & Sampson



Data Source: Weston & Sampson, based on a comprehensive analysis of asset vulnerability, sensitivity, and exposure indicators.

Vulnerability Assessment Results: Asset Inventory Scored

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High



Weston & Sampson



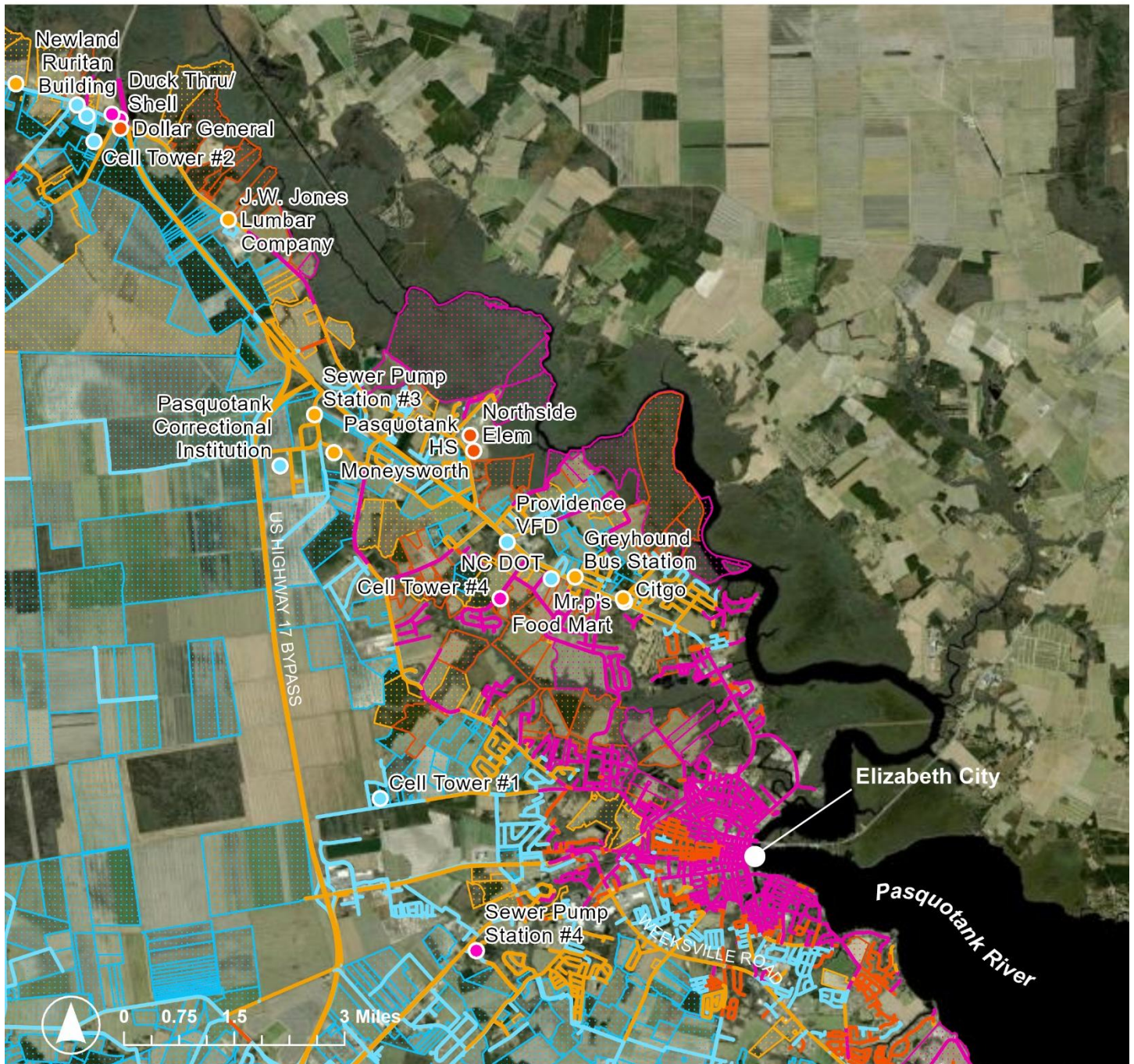
North Carolina
RESILIENT
COMMUNITIES
PROGRAM



Data Source: Weston & Sampson, based on a comprehensive analysis of asset vulnerability, sensitivity, and exposure indicators.

Vulnerability Assessment Results: Asset Inventory Scored

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

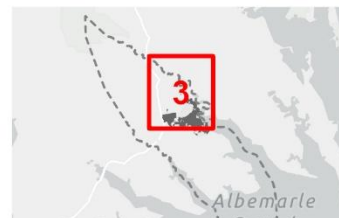
- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High



Weston & Sampson



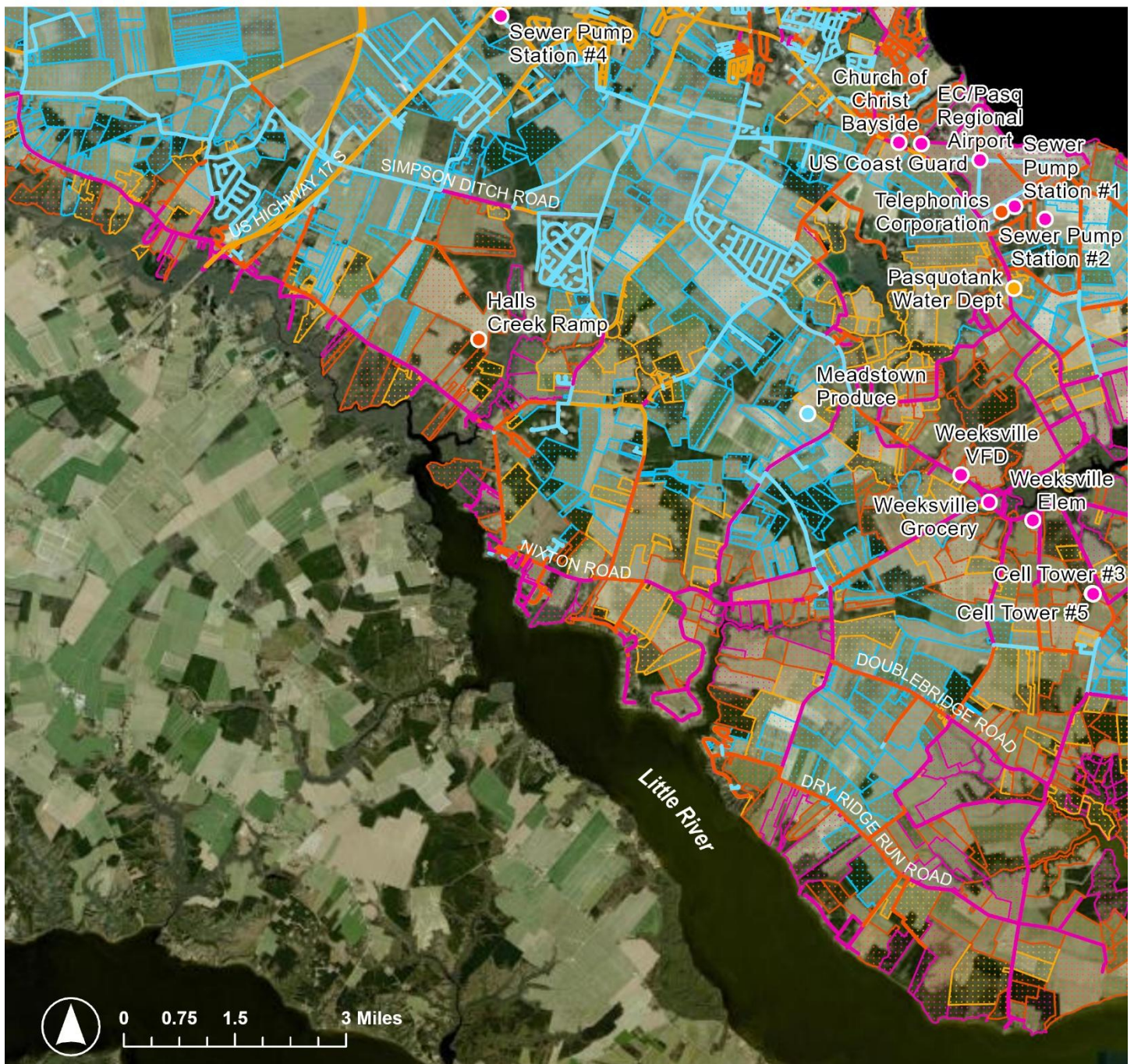
North Carolina
Resilient
Coastal
Communities
Program



Data Source: Weston & Sampson, based on a comprehensive analysis of asset vulnerability, sensitivity, and exposure indicators.

Vulnerability Assessment Results: Asset Inventory Scored

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High



Weston & Sampson



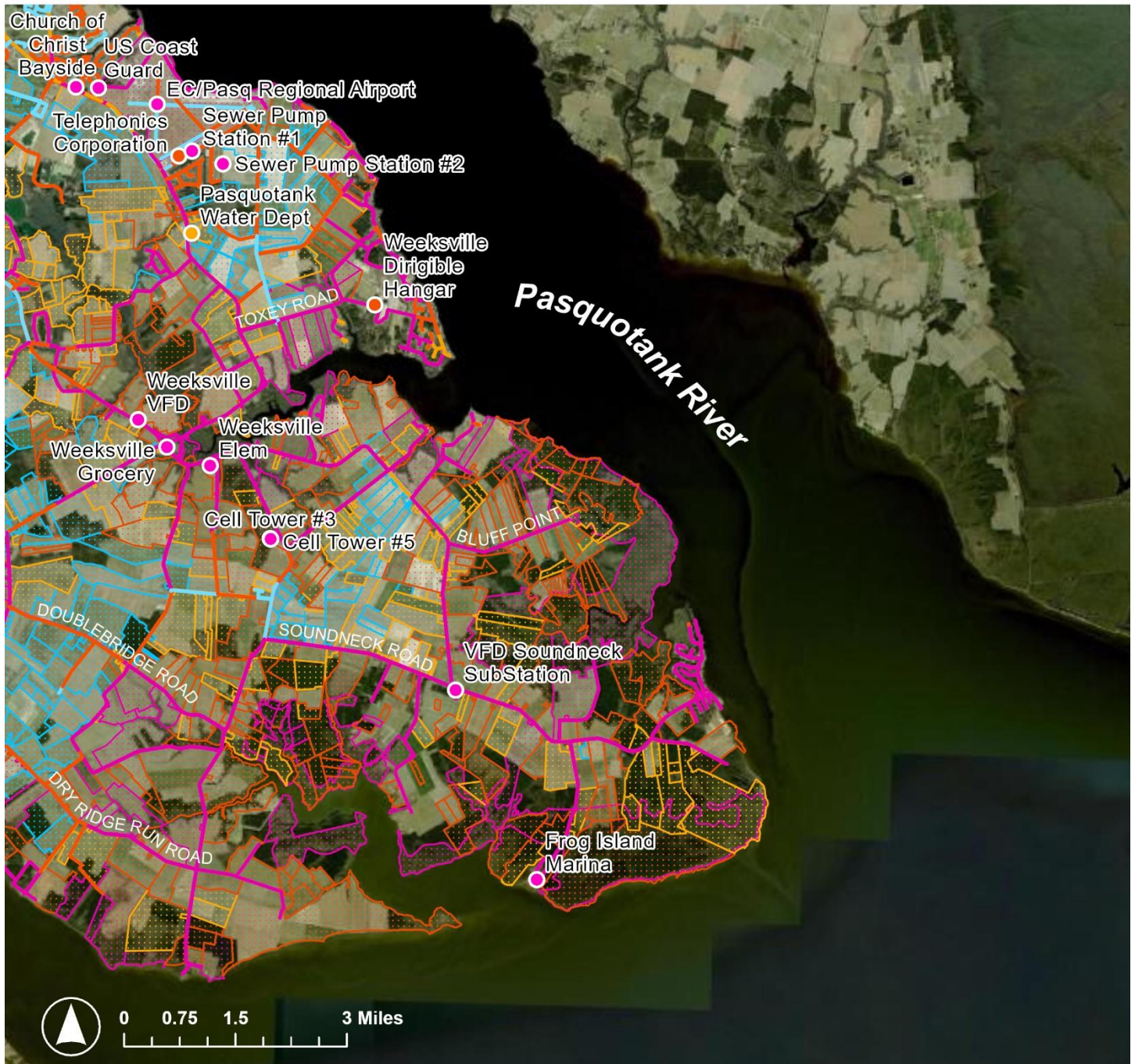
PASQUOTANK COUNTY



Data Source: Weston & Sampson, based on a comprehensive analysis of asset vulnerability, sensitivity, and exposure indicators.

Vulnerability Assessment Results: Asset Inventory Scored

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High



Weston & Sampson



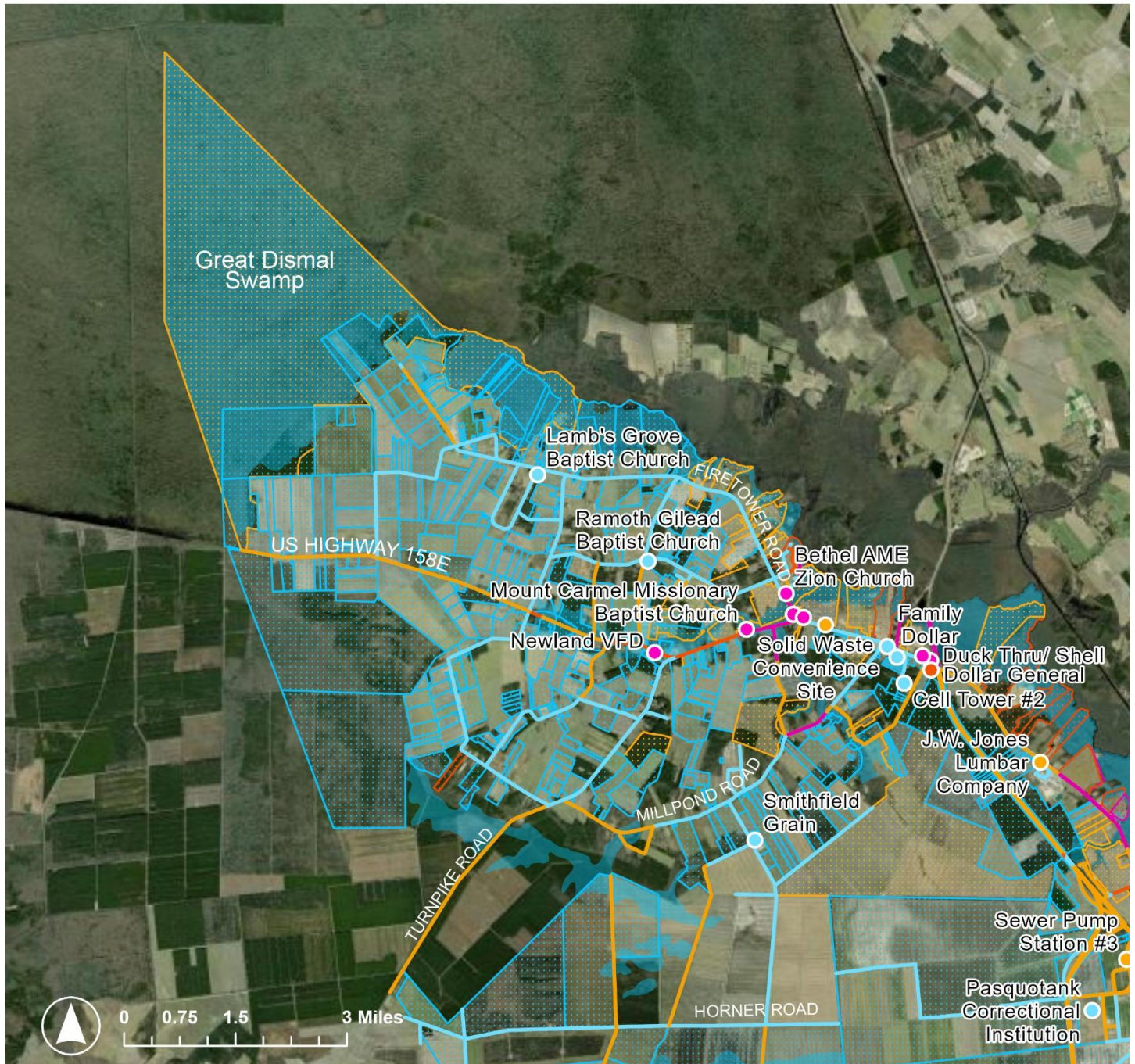
NORTH CAROLINA
RESILIENT
COASTAL
COMMUNITIES
PROGRAM



Data Source: Weston & Sampson, based on a comprehensive analysis of asset vulnerability, sensitivity, and exposure indicators.

Vulnerability Assessment Results: Asset Inventory Scored + FEMA Flood Hazard

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High

Flood Hazard (FEMA)

- 0.2% Annual Chance Flood
- 1% Annual Chance Flood



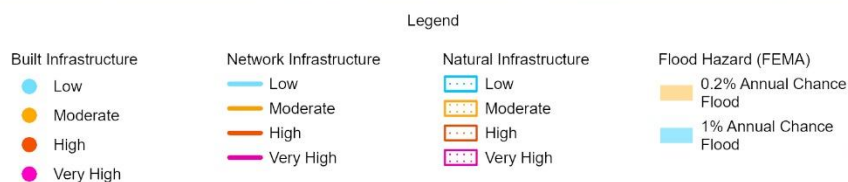
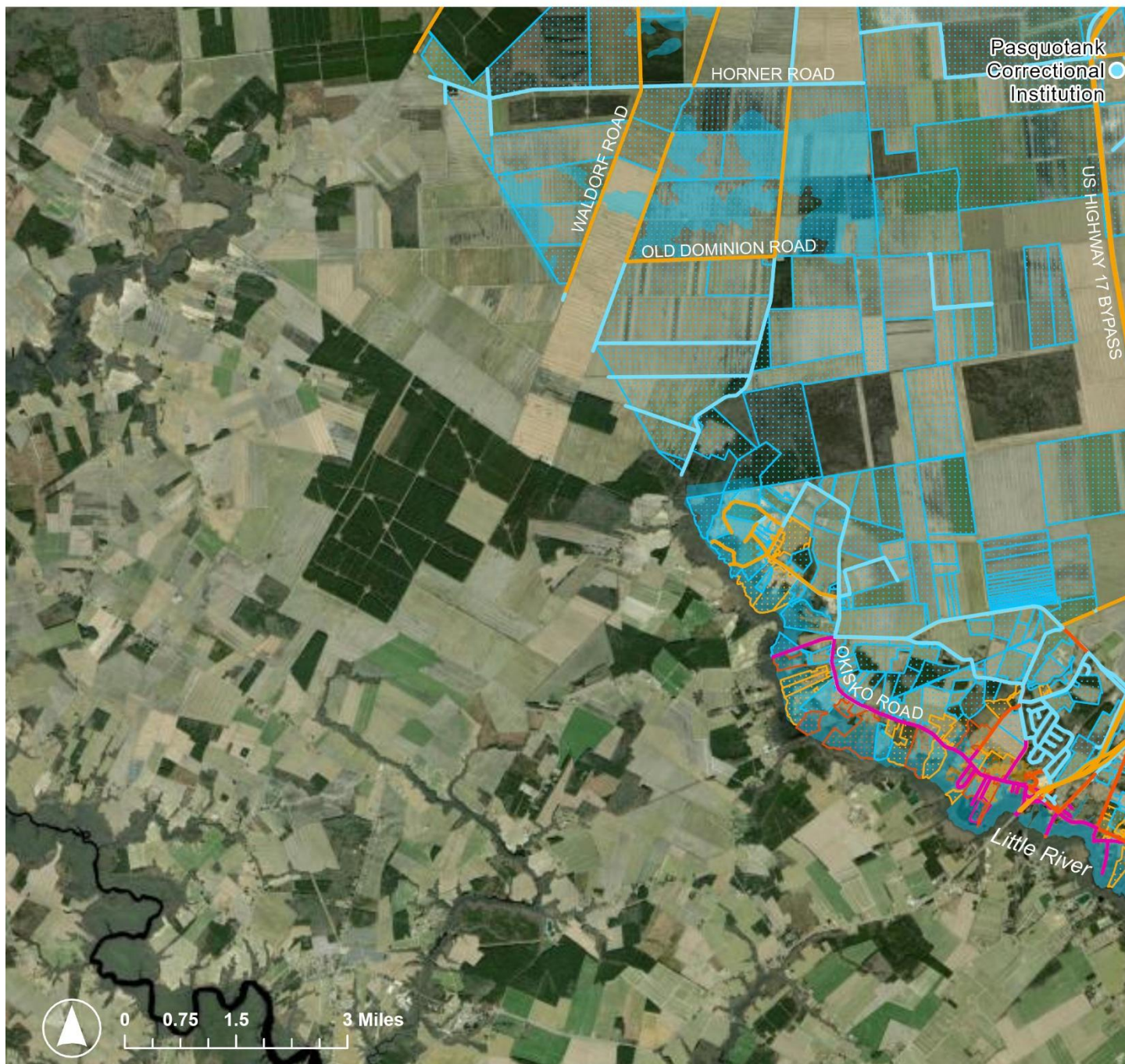
Weston & Sampson



Data Source: FEMA National Flood Insurance Program (NFIP). Flood Hazard Zones. <https://www.fema.gov/flood-maps>

Vulnerability Assessment Results: Asset Inventory Scored + FEMA Flood Hazard

Pasquotank County Resiliency Strategy | July 2026



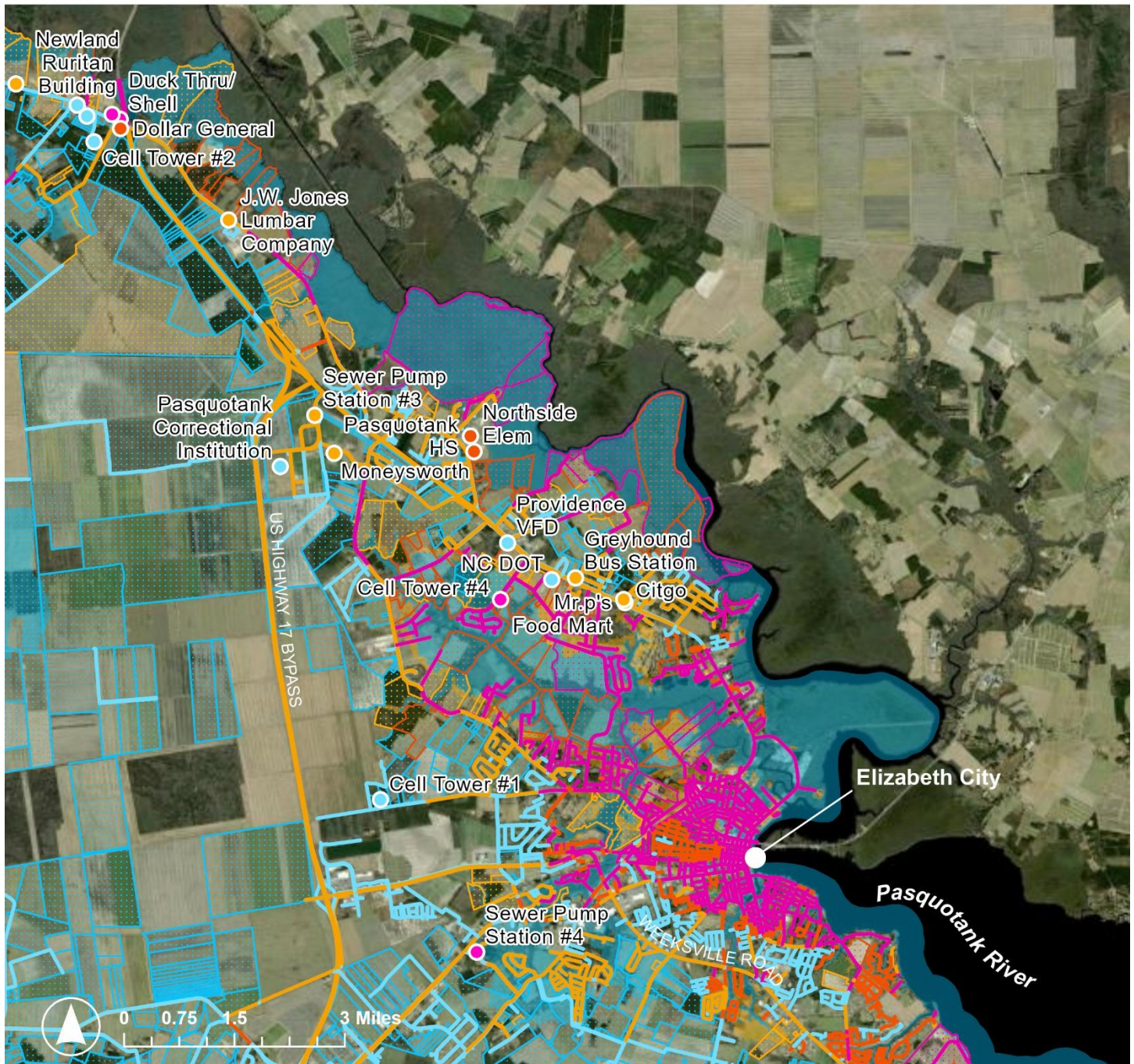
Weston & Sampson



Data Source: FEMA National Flood Insurance Program (NFIP). Flood Hazard Zones. <https://www.fema.gov/flood-maps>

Vulnerability Assessment Results: Asset Inventory Scored + FEMA Flood Hazard

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High

Flood Hazard (FEMA)

- 0.2% Annual Chance Flood
- 1% Annual Chance Flood



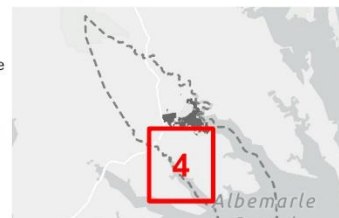
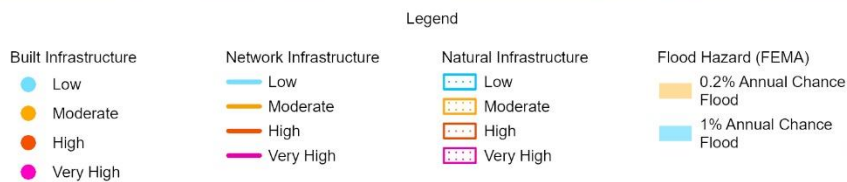
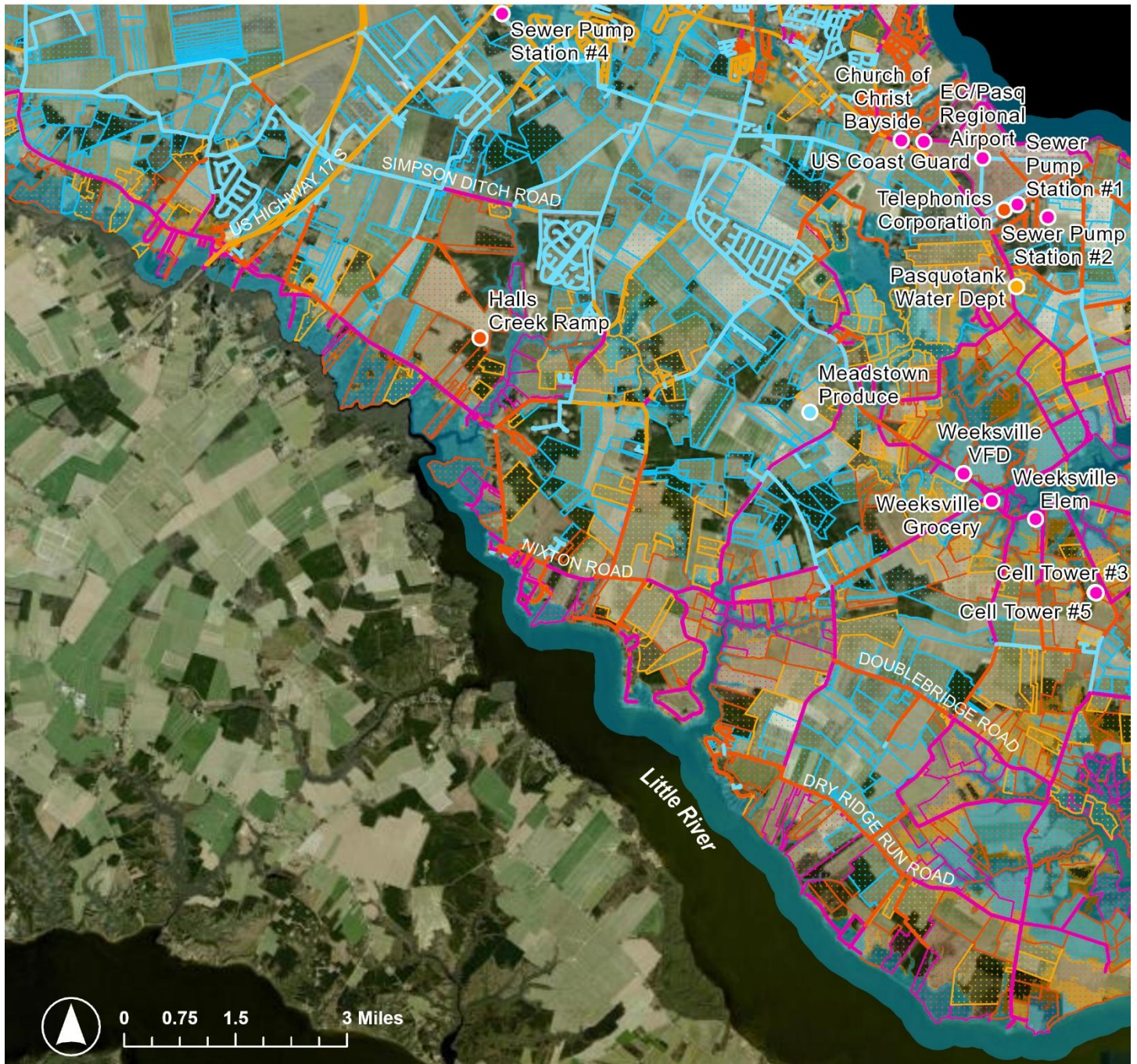
Weston & Sampson



Data Source: FEMA National Flood Insurance Program (NFIP). Flood Hazard Zones. <https://www.fema.gov/flood-maps>

Vulnerability Assessment Results: Asset Inventory Scored + FEMA Flood Hazard

Pasquotank County Resiliency Strategy | July 2026



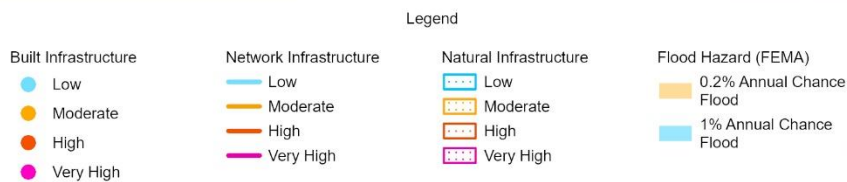
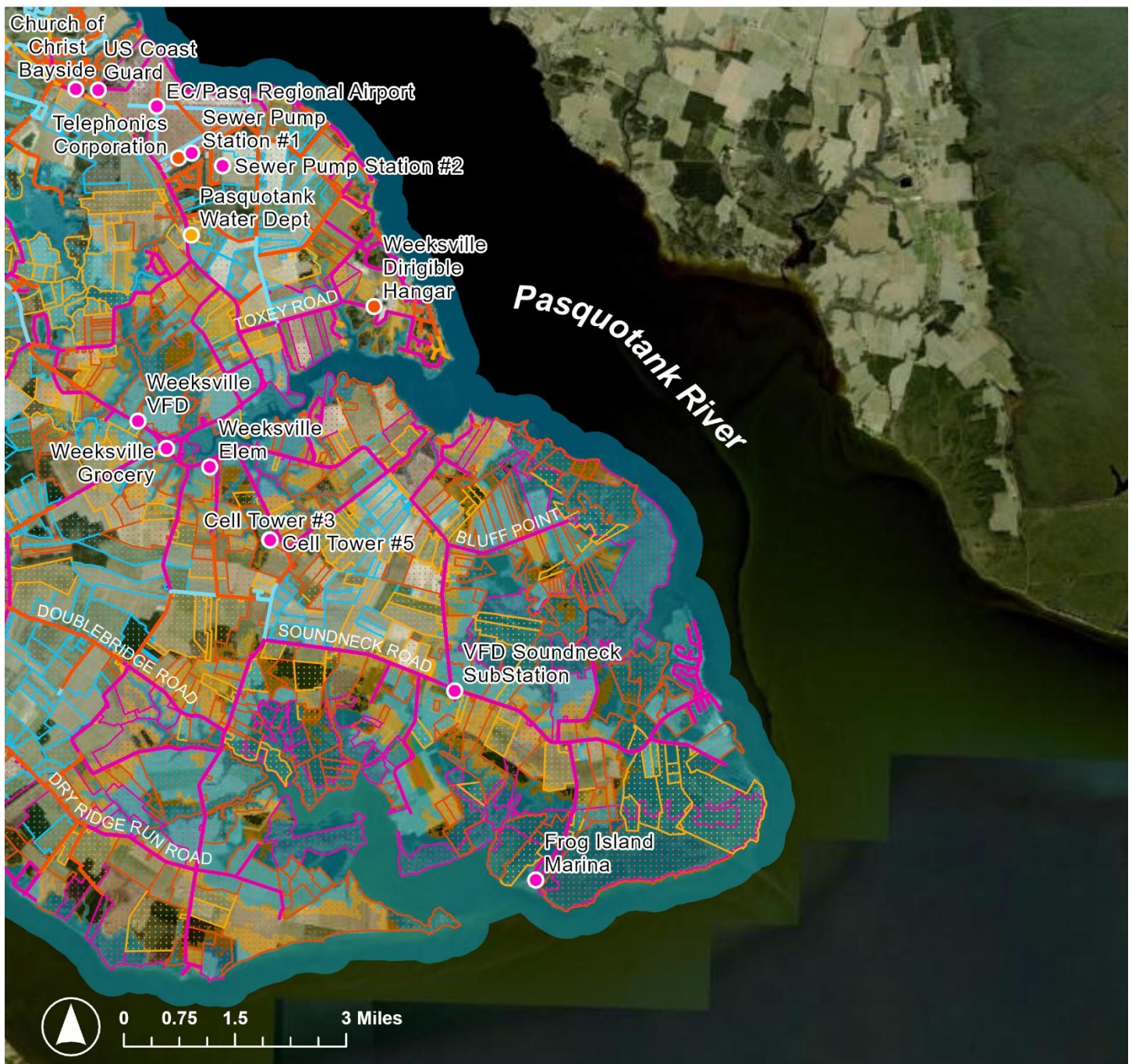
Weston & Sampson



Data Source: FEMA National Flood Insurance Program (NFIP). Flood Hazard Zones. <https://www.fema.gov/flood-maps>

Vulnerability Assessment Results: Asset Inventory Scored + FEMA Flood Hazard

Pasquotank County Resiliency Strategy | July 2026



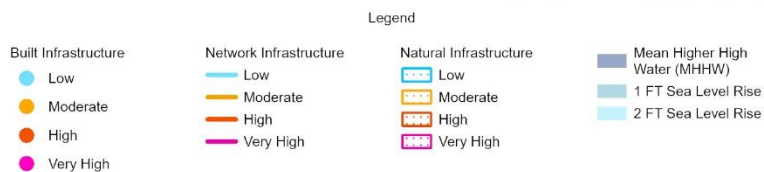
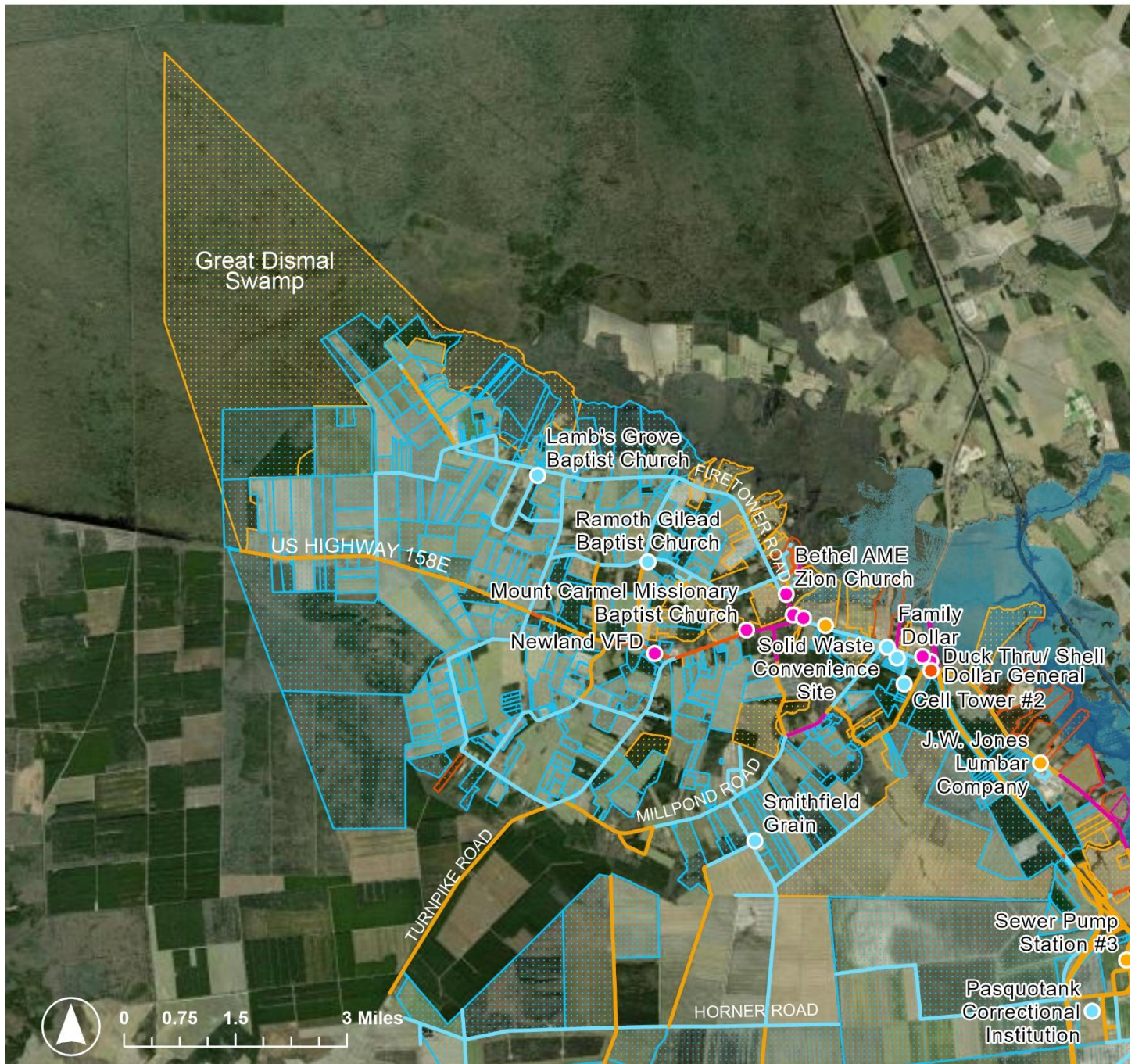
Weston & Sampson



Data Source: FEMA National Flood Insurance Program (NFIP). Flood Hazard Zones. <https://www.fema.gov/flood-maps>

Vulnerability Assessment Results: Asset Inventory Scored + Tidal Flooding

Pasquotank County Resiliency Strategy | July 2026



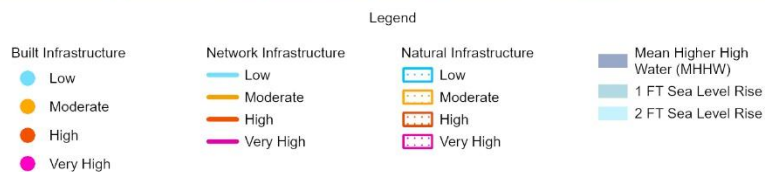
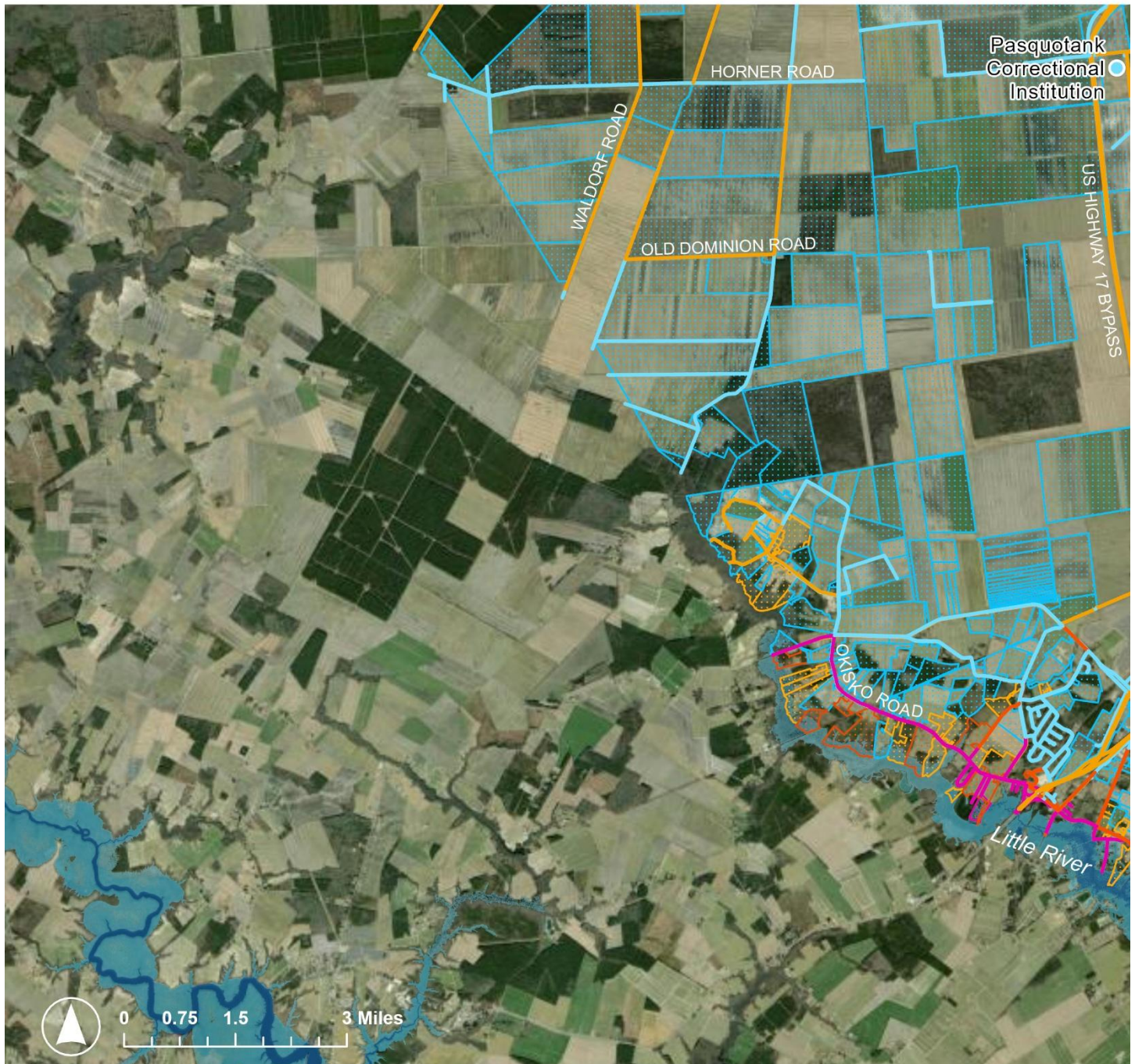
Weston & Sampson



Data Source: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service. (2025). Sea level rise. <https://oceanservice.noaa.gov/hazards/sealevelrise/>

Vulnerability Assessment Results: Asset Inventory Scored + Tidal Flooding

Pasquotank County Resiliency Strategy | July 2026



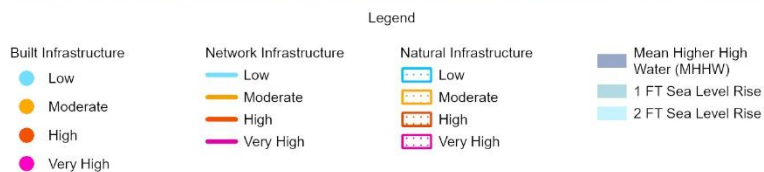
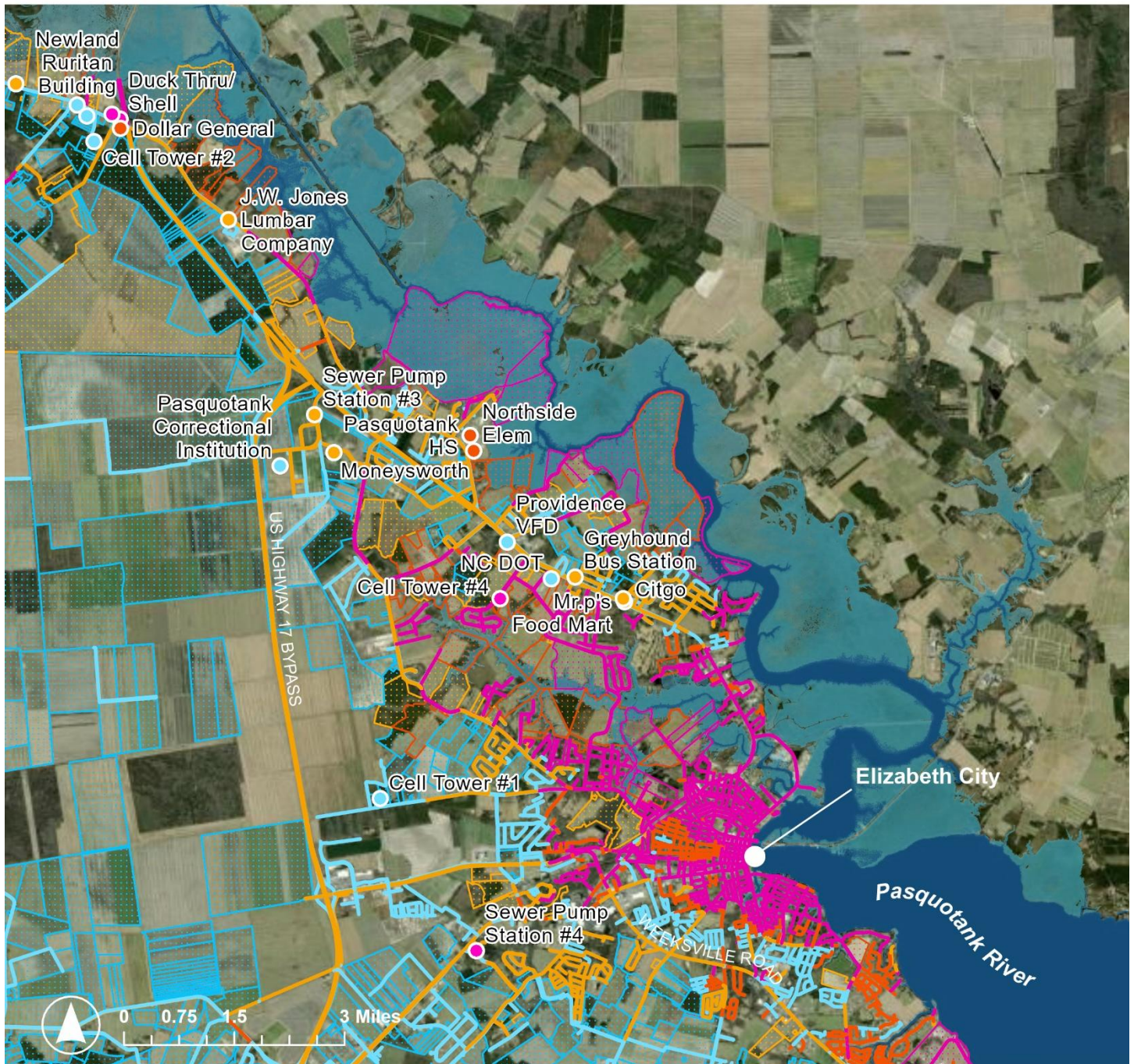
Weston & Sampson



Data Source: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service. (2025). Sea level rise. <https://oceanservice.noaa.gov/hazards/sealevelrise/>

Vulnerability Assessment Results: Asset Inventory Scored + Tidal Flooding

Pasquotank County Resiliency Strategy | July 2026



Weston & Sampson



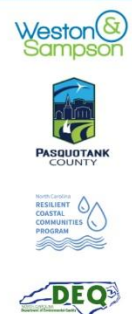
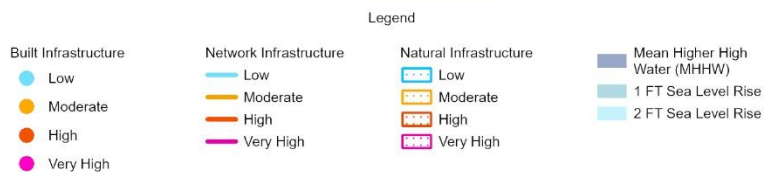
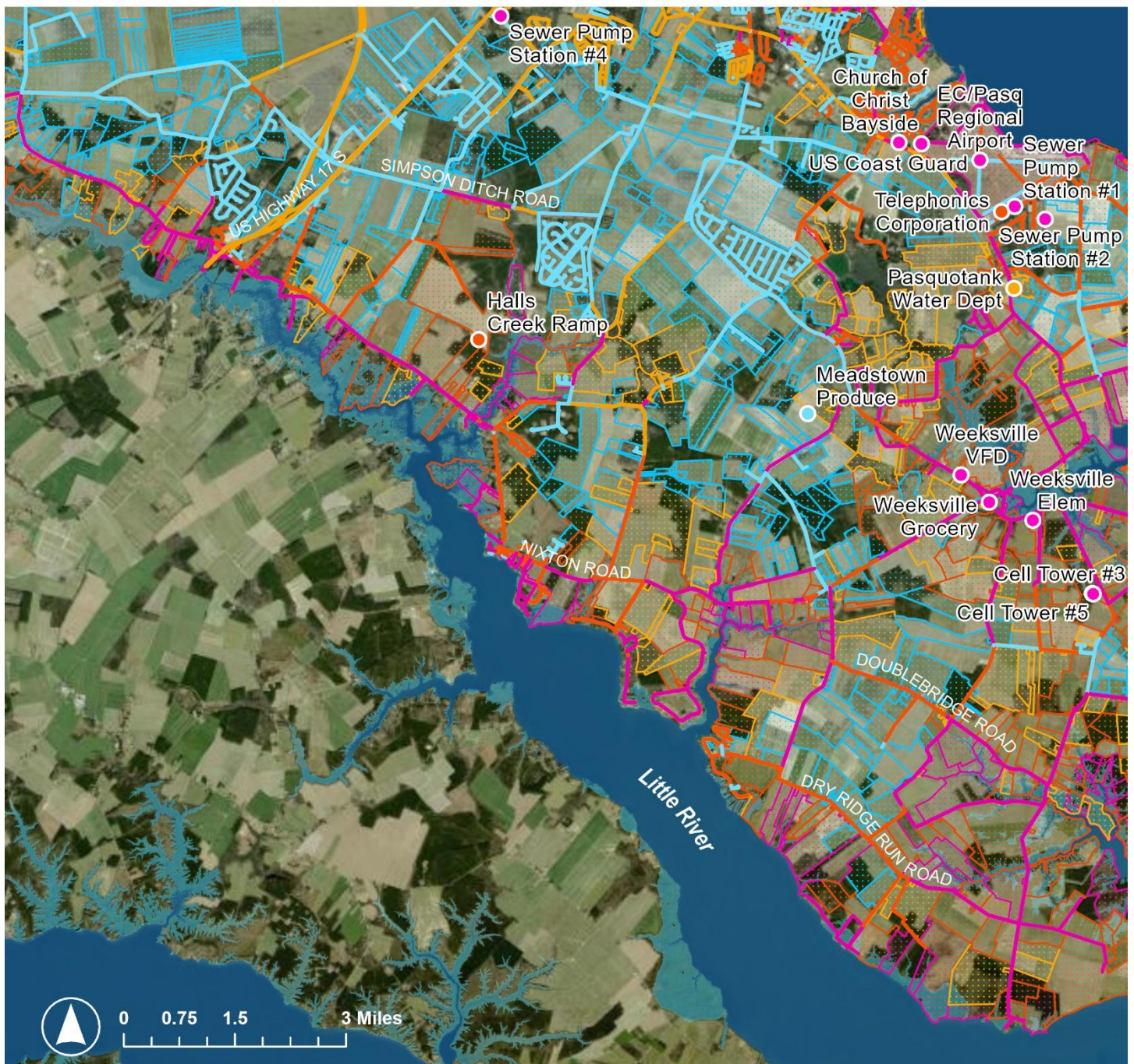
NORTH CAROLINA
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COASTAL
COMMUNITIES
PROGRAM



Data Source: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service. (2025). Sea level rise. <https://oceanservice.noaa.gov/hazards/sealevelrise/>

Vulnerability Assessment Results: Asset Inventory Scored + Tidal Flooding

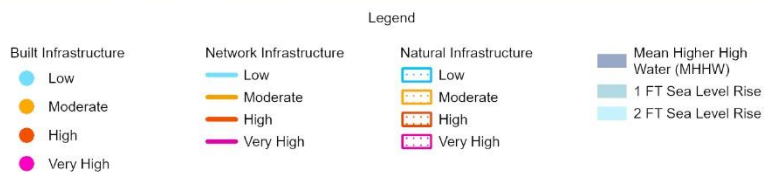
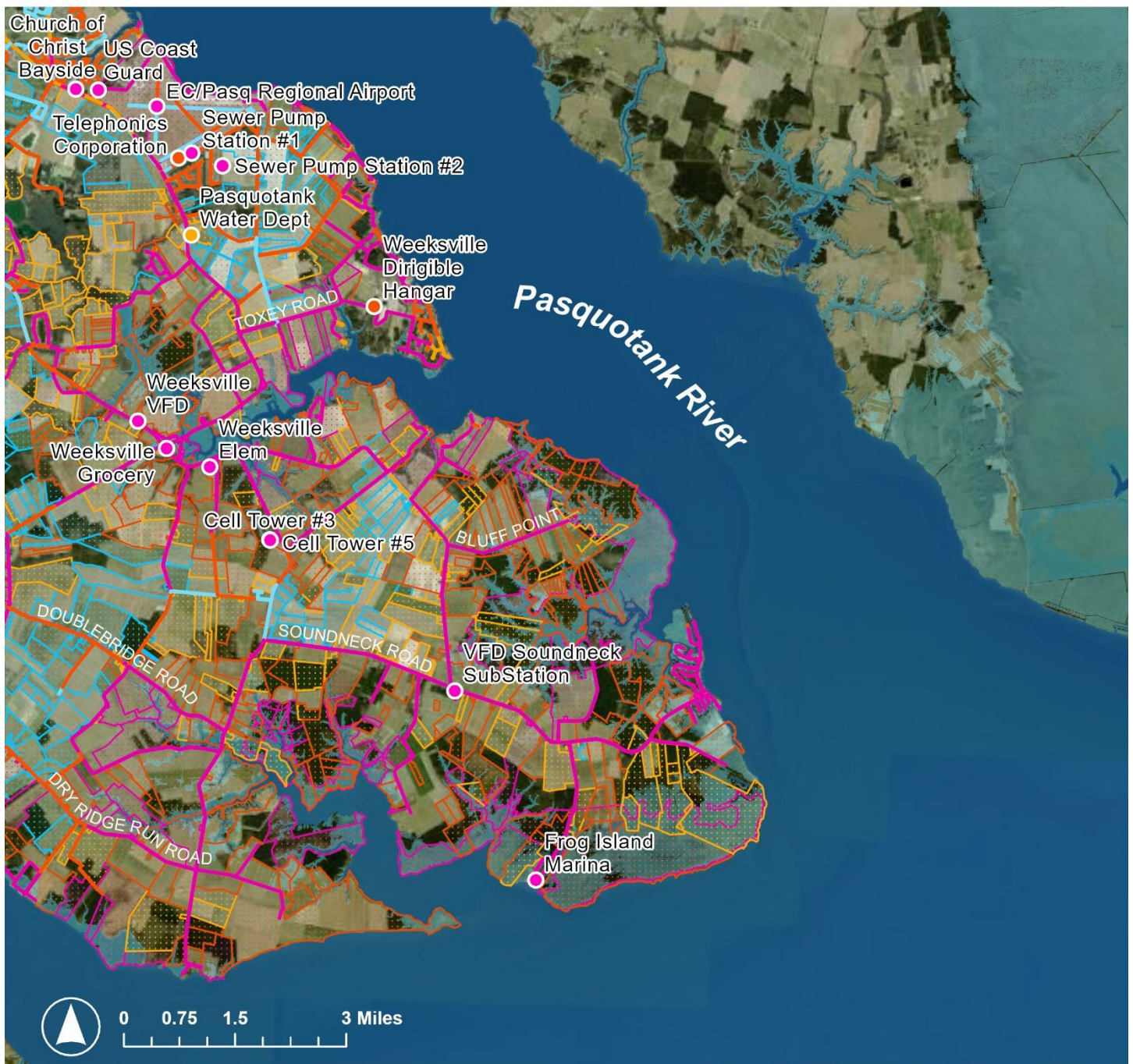
Pasquotank County Resiliency Strategy | July 2026



Data Source: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service. (2025). Sea level rise. <https://oceanservice.noaa.gov/hazards/sealevelrise/>

Vulnerability Assessment Results: Asset Inventory Scored + Tidal Flooding

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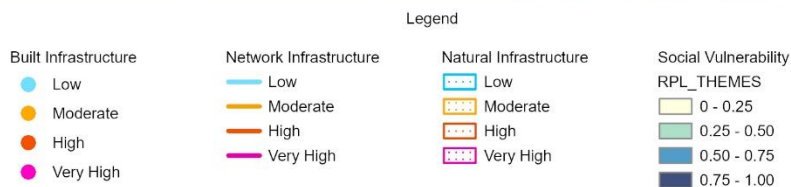
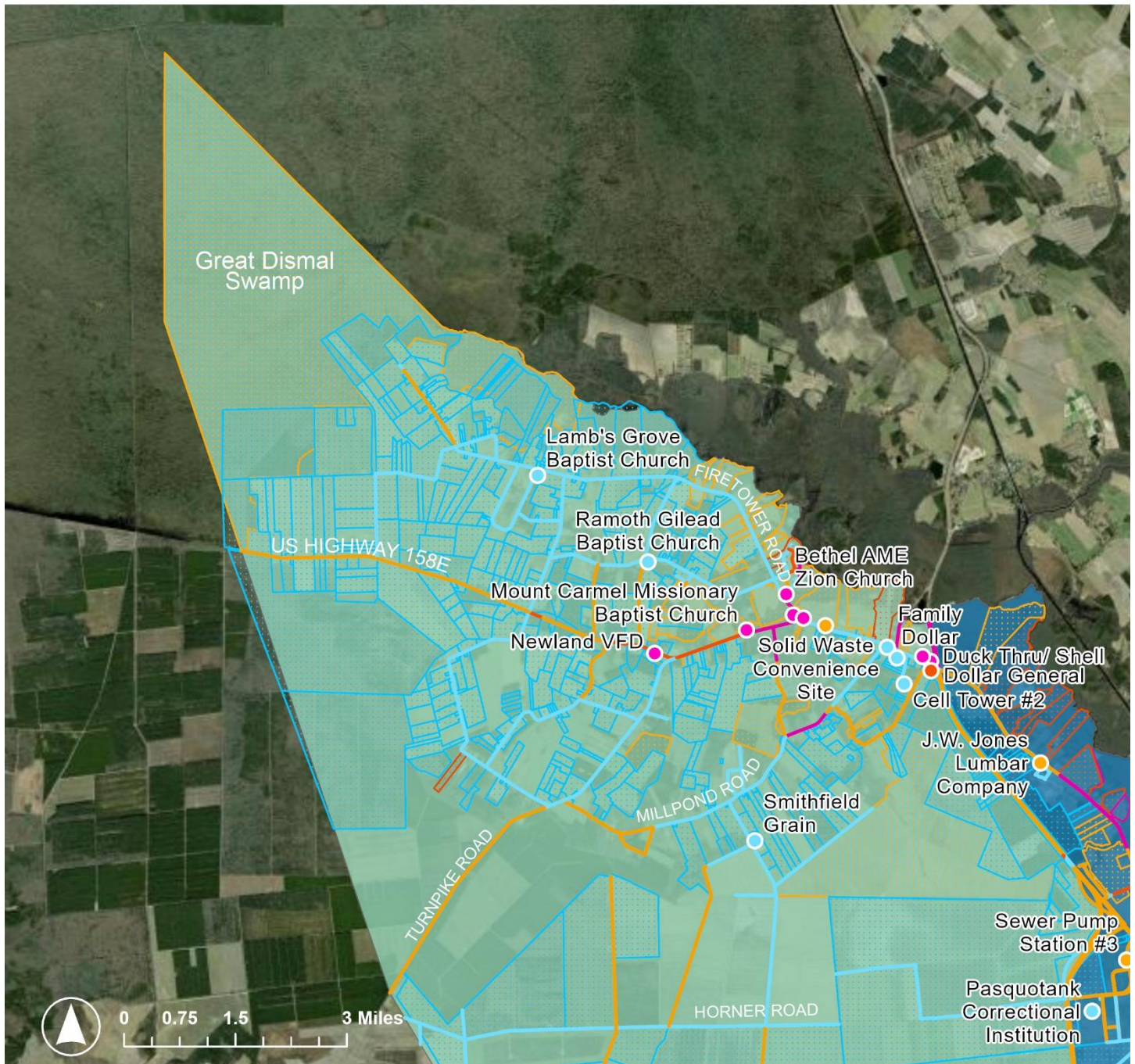
Weston & Sampson



Data Source: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service. (2025). Sea level rise. <https://oceanservice.noaa.gov/hazards/sealevelrise/>

Vulnerability Assessment Results: Asset Inventory Scored + Social Vulnerability

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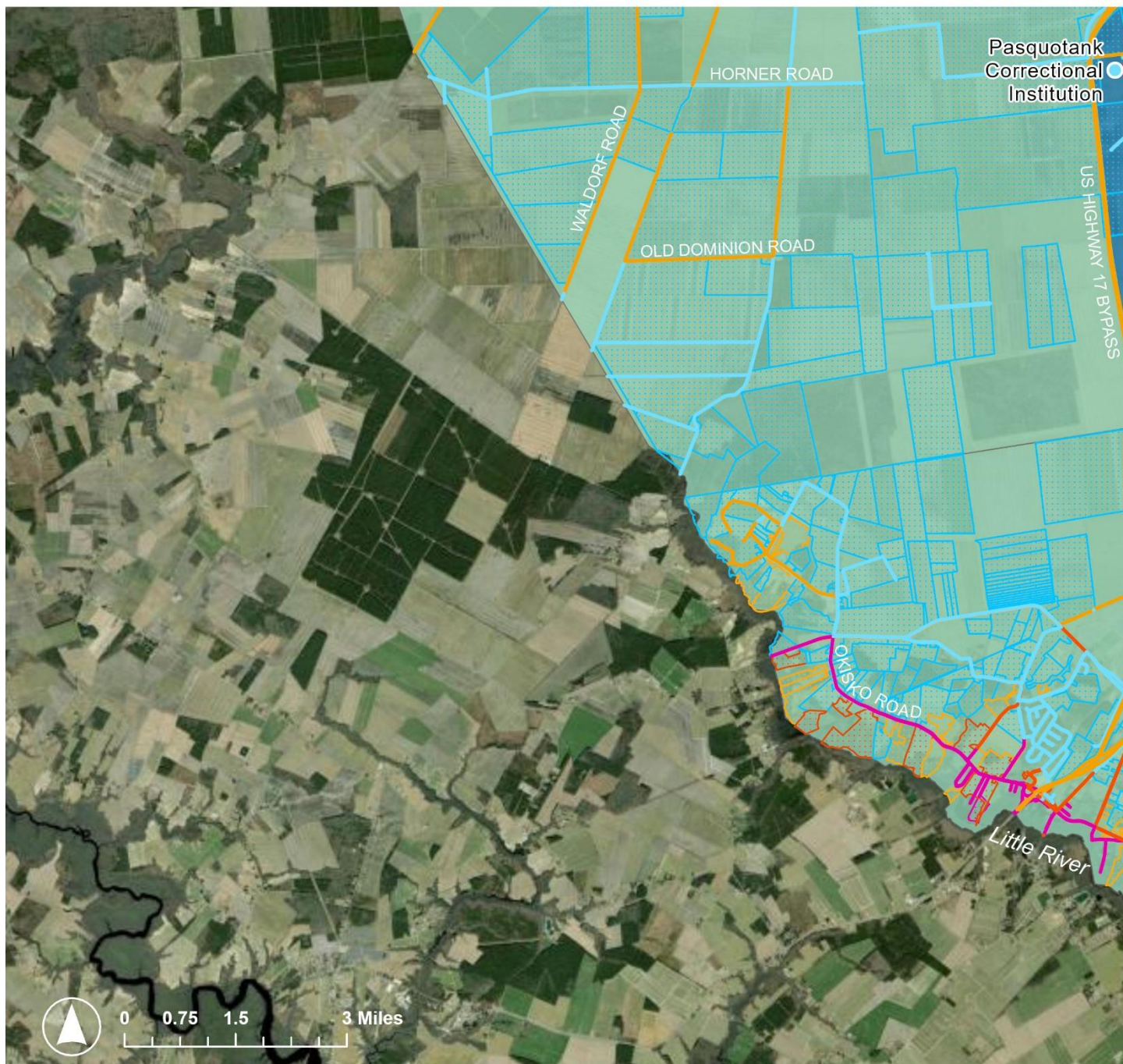
Weston & Sampson



Data Source: Centers for Disease Control and Prevention (CDC), Agency for Toxic Substances and Disease Registry (ATSDR). (2022). Social Vulnerability Index (SVI).

Vulnerability Assessment Results: Asset Inventory Scored + Social Vulnerability

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High

Social Vulnerability

- RPL_THEMES
- 0 - 0.25
 - 0.25 - 0.50
 - 0.50 - 0.75
 - 0.75 - 1.00



Weston & Sampson



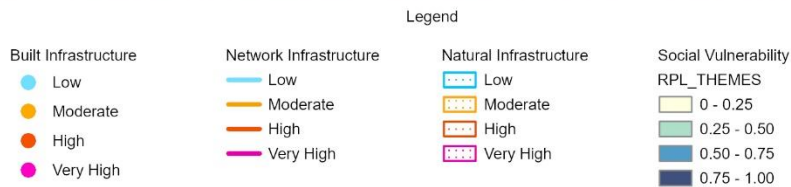
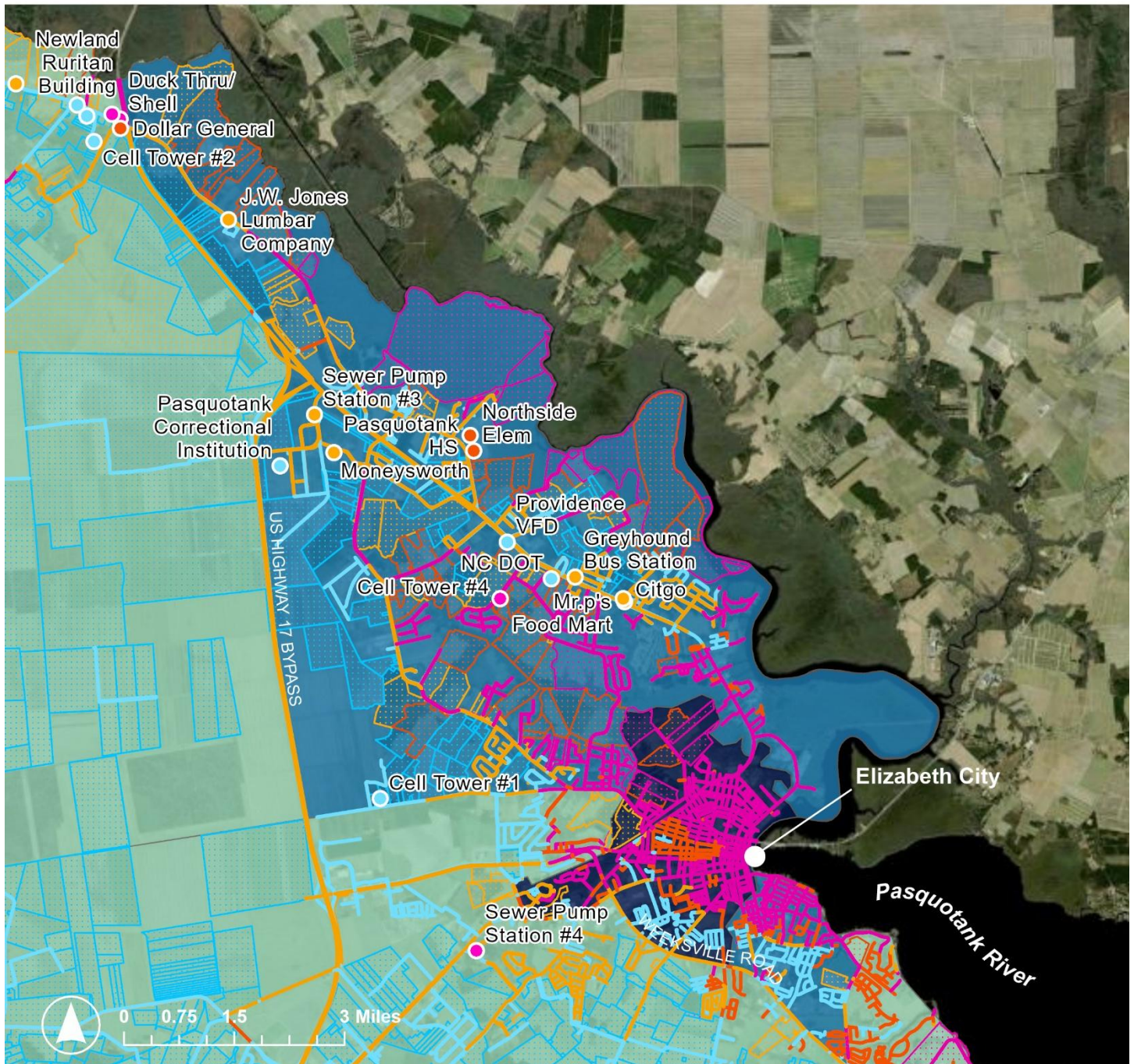
NORTH CAROLINA
RESILIENT
COASTAL
COMMUNITIES
PROGRAM



Data Source: Centers for Disease Control and Prevention (CDC), Agency for Toxic Substances and Disease Registry (ATSDR). (2022). Social Vulnerability Index (SVI).

Vulnerability Assessment Results: Asset Inventory Scored + Social Vulnerability

Pasquotank County Resiliency Strategy | July 2026



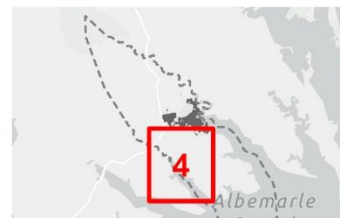
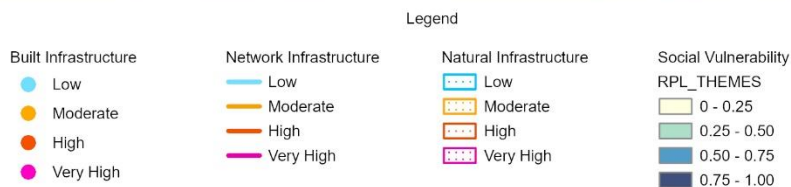
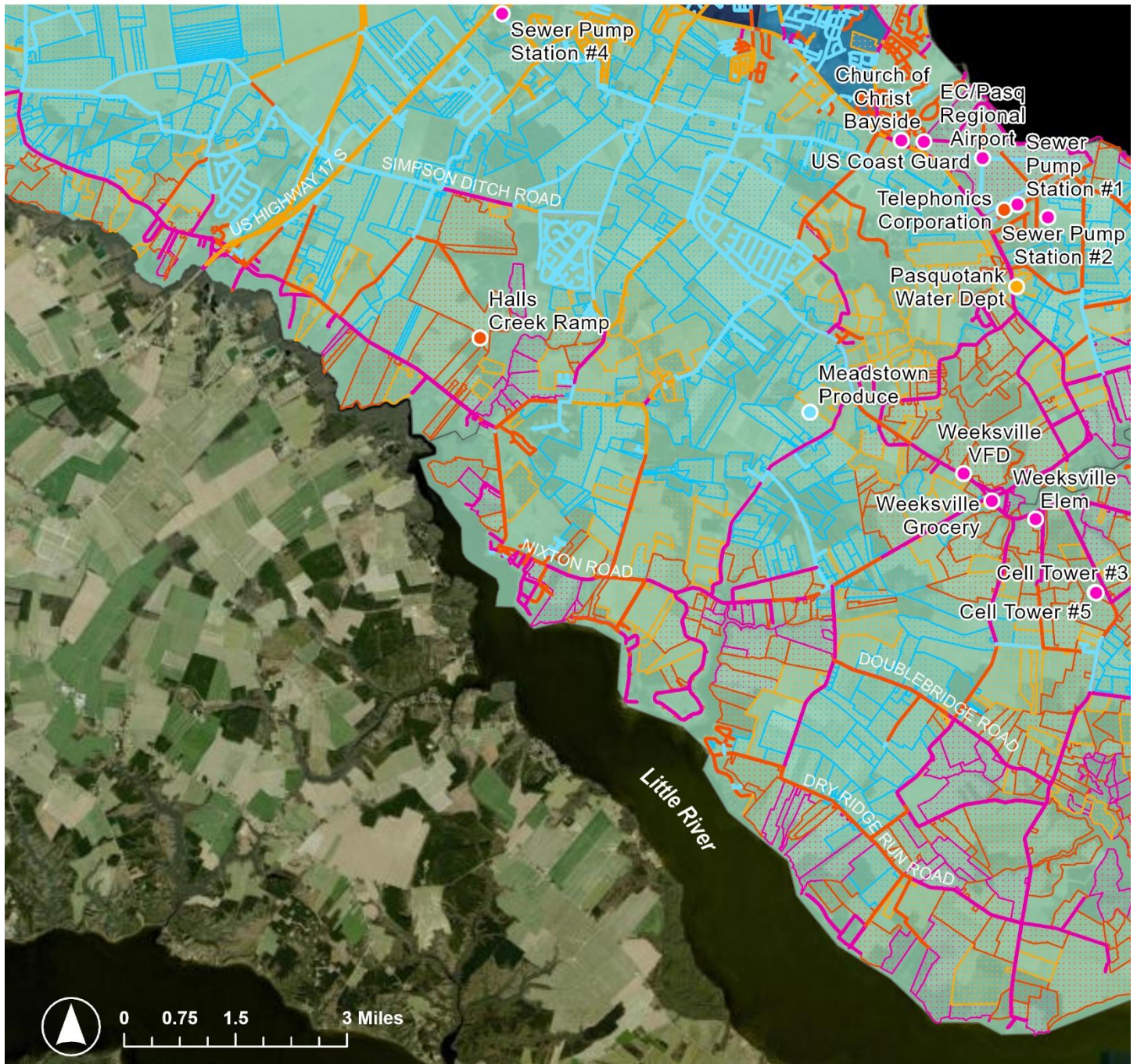
Weston & Sampson



Data Source: Centers for Disease Control and Prevention (CDC), Agency for Toxic Substances and Disease Registry (ATSDR). (2022). Social Vulnerability Index (SVI).

Vulnerability Assessment Results: Asset Inventory Scored + Social Vulnerability

Pasquotank County Resiliency Strategy | July 2026

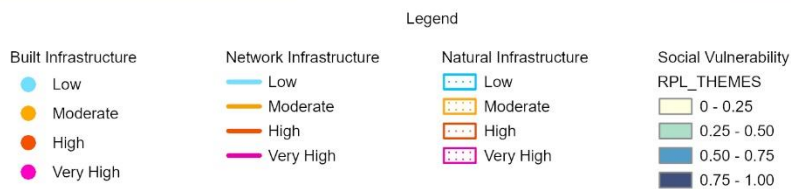
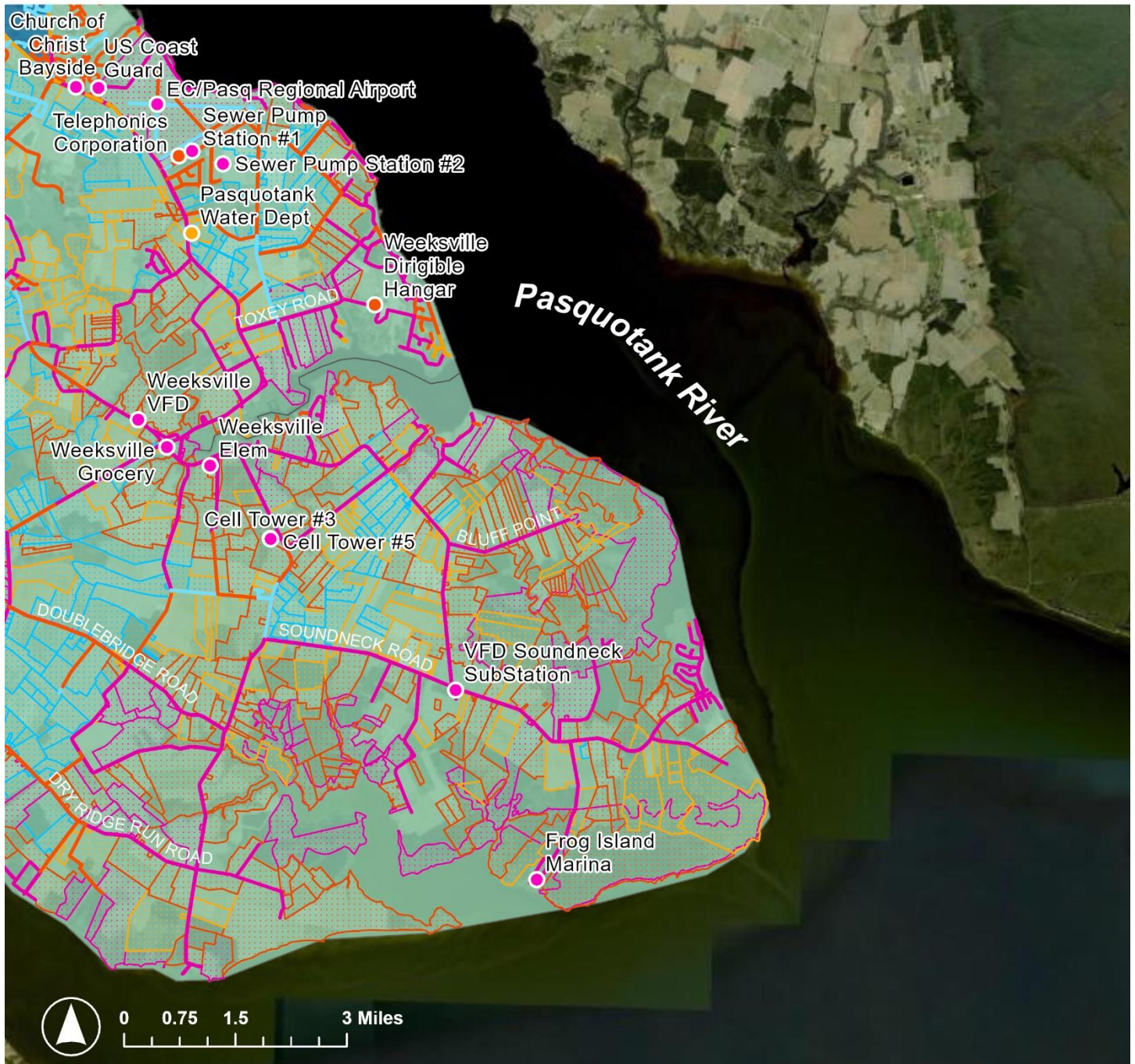


Data Source: Centers for Disease Control and Prevention (CDC), Agency for Toxic Substances and Disease Registry (ATSDR). (2022). Social Vulnerability Index (SVI).



Vulnerability Assessment Results: Asset Inventory Scored + Social Vulnerability

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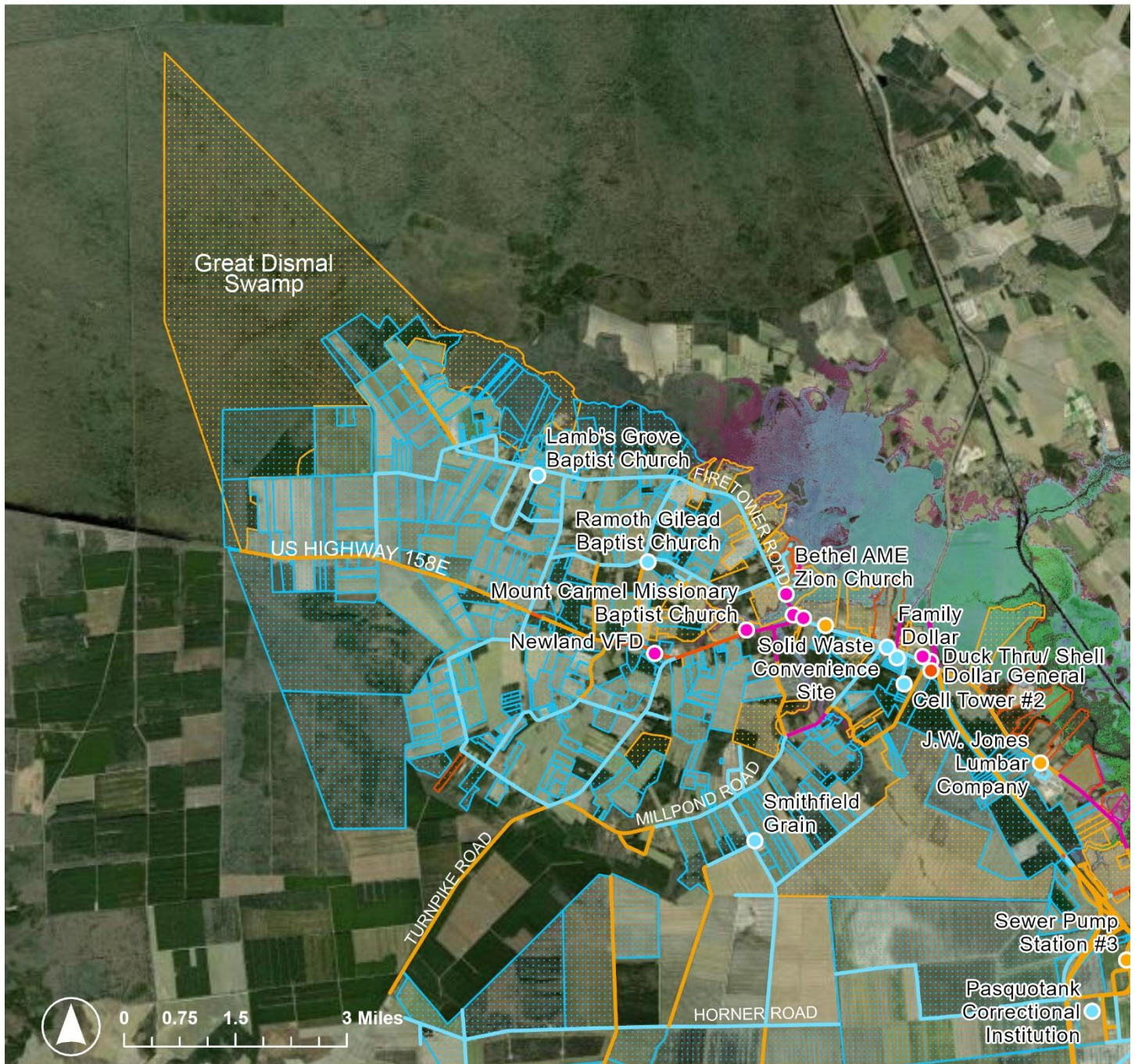
NORTH CAROLINA
RESILIENT
COASTAL
COMMUNITIES
PROGRAM



Data Source: Centers for Disease Control and Prevention (CDC), Agency for Toxic Substances and Disease Registry (ATSDR). (2022). Social Vulnerability Index (SVI).

Vulnerability Assessment Results: Asset Inventory Scored + Category 2 Storm Surge

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

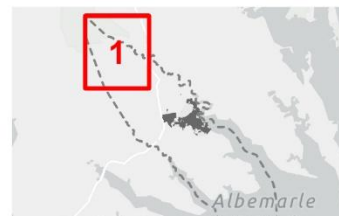
- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High

Category 2 Storm Surge (MOM)

- Value (Feet)
- 12
 - 1



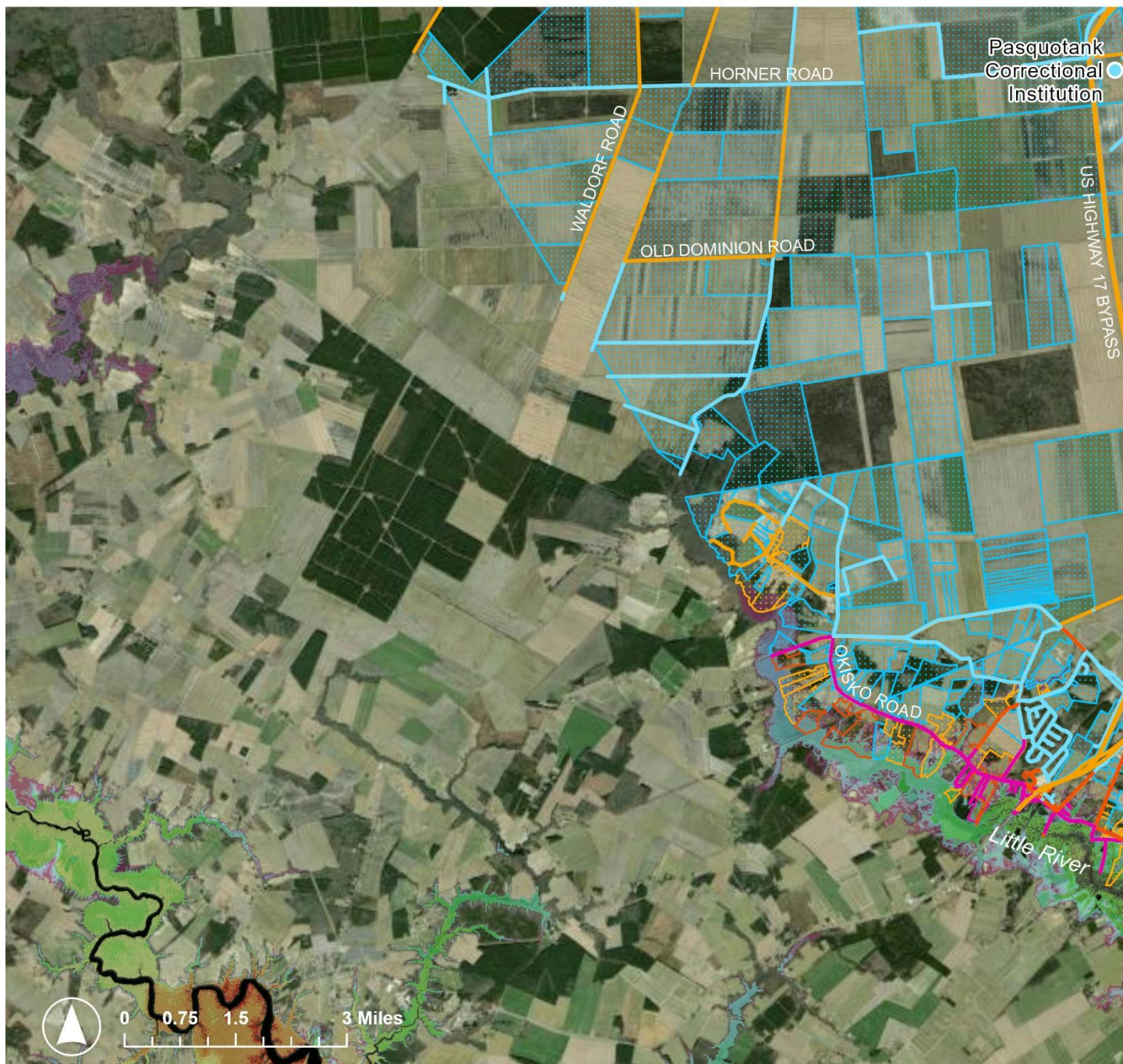
Weston & Sampson



Data Source: NOAA National Hurricane Center. SLOSH Maximum of Maximum (MOM) Storm Surge – Category 2. National Oceanic and Atmospheric Administration. <https://www.nhc.noaa.gov>

Vulnerability Assessment Results: Asset Inventory Scored + Category 2 Storm Surge

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure

- Low
- Moderate
- High
- Very High

Network Infrastructure

- Low
- Moderate
- High
- Very High

Natural Infrastructure

- Low
- Moderate
- High
- Very High

Category 2 Storm Surge (MOM)

- Value (Feet)
- 12
 - 1



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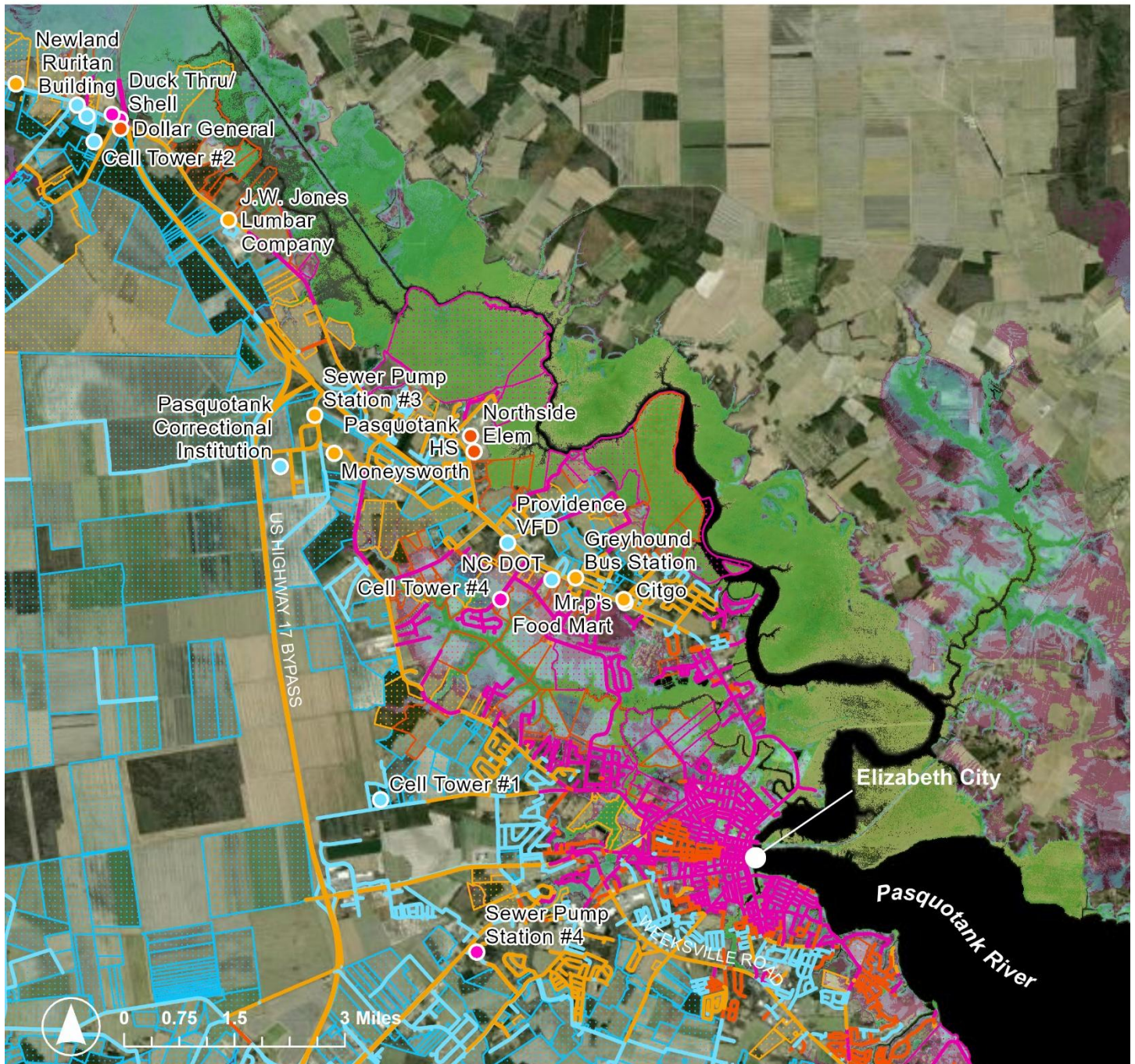
North Carolina
Resilient Coastal Communities
Program



Data Source: NOAA National Hurricane Center. SLOSH Maximum of Maximum (MOM) Storm Surge – Category 2. National Oceanic and Atmospheric Administration. <https://www.nhc.noaa.gov>

Vulnerability Assessment Results: Asset Inventory Scored + Category 2 Storm Surge

Pasquotank County Resiliency Strategy | July 2026



Legend

Built Infrastructure	Network Infrastructure	Natural Infrastructure	Category 2 Storm Surge (MOM) Value (Feet)
Low	Low	Low	12
Moderate	Moderate	Moderate	10
High	High	High	8
Very High	Very High	Very High	6



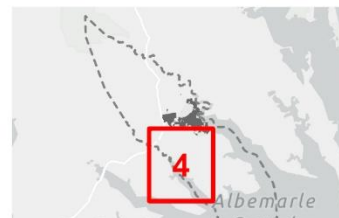
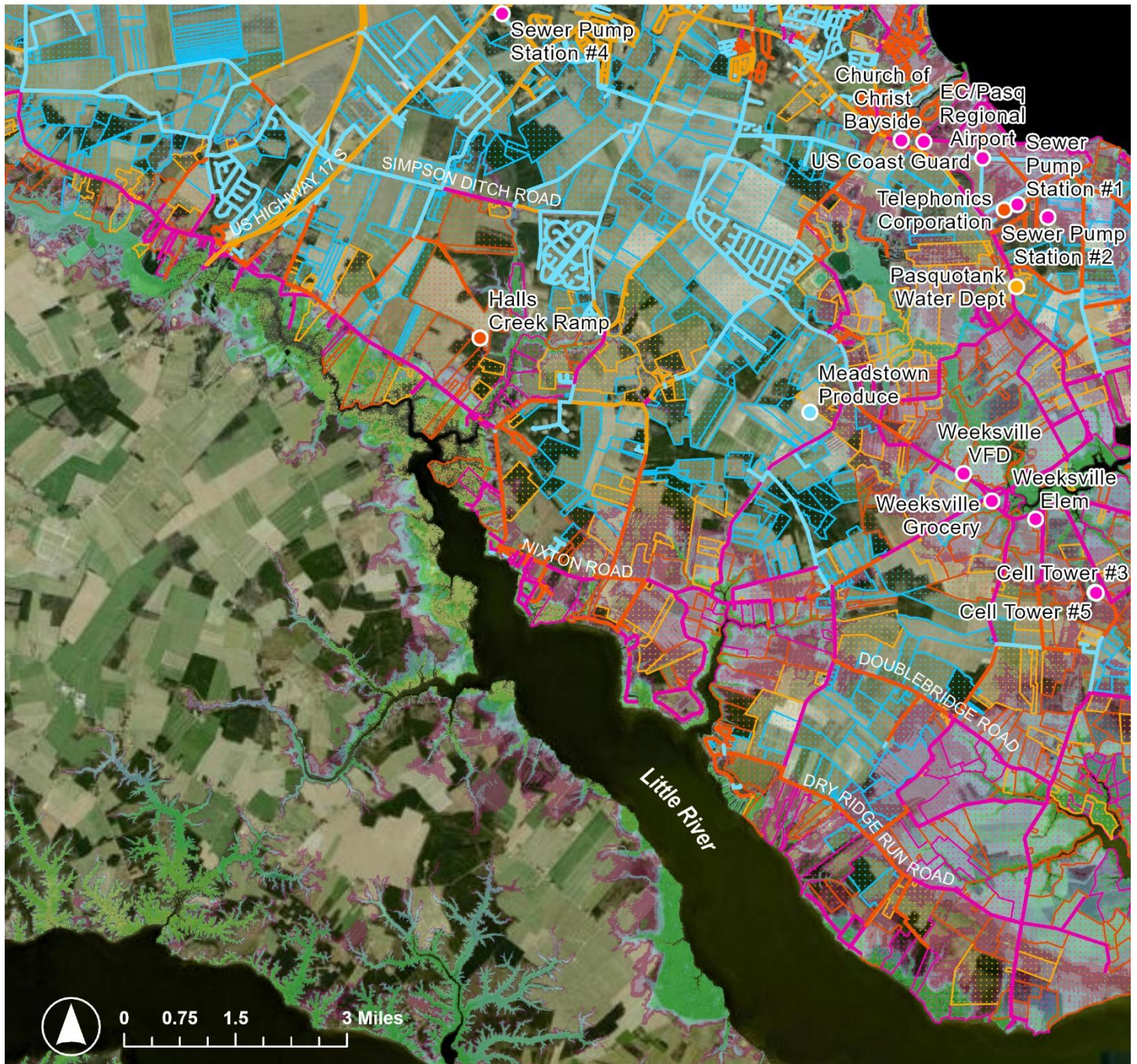
Weston & Sampson



Data Source: NOAA National Hurricane Center. SLOSH Maximum of Maximum (MOM) Storm Surge – Category 2. National Oceanic and Atmospheric Administration. <https://www.nhc.noaa.gov>

Vulnerability Assessment Results: Asset Inventory Scored + Category 2 Storm Surge

Pasquotank County Resiliency Strategy | July 2026



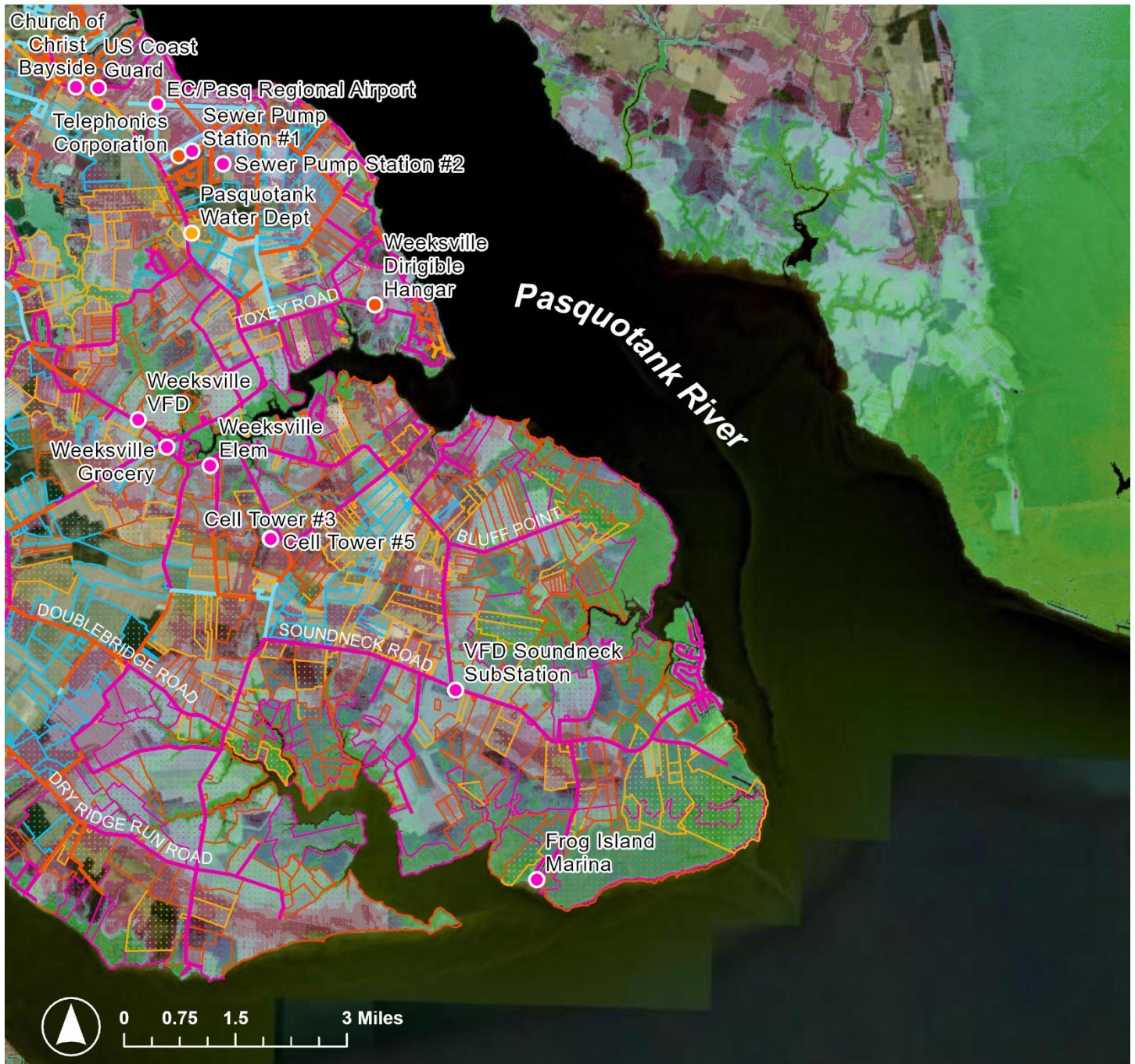
Weston & Sampson



Data Source: NOAA National Hurricane Center. SLOSH Maximum of Maximum (MOM) Storm Surge – Category 2. National Oceanic and Atmospheric Administration. <https://www.nhc.noaa.gov>

Vulnerability Assessment Results: Asset Inventory Scored + Category 2 Storm Surge

Pasquotank County Resiliency Strategy | July 2026



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RESILIENT
COASTAL
COMMUNITIES
PROGRAM

DEQ

Data Source: NOAA National Hurricane Center. SLOSH Maximum of Maximum (MOM) Storm Surge – Category 2. National Oceanic and Atmospheric Administration. <https://www.nhc.noaa.gov>