



WithersRavenel
Our People. Your Success.

North Carolina Resilient Coastal Communities Program (RCCP)

Phases I and II Currituck County, NC

Prepared For:

NC Dept. of Environmental Quality
Division of Coastal Management
400 Commerce Ave
Morehead City, NC 28577

Prepared By:

WithersRavenel
115 MacKenan Drive
Cary, NC 27511
919.469.3340
License No. F-1479

April, 2022

WR No. 03210062.00



Stephen Marks, PE, CFM

Katherine Knight, EI

Caroline Richardson, AICP



Executive Summary

Currituck County underwent a thorough planning process to review coastal hazards and identify potential solutions that provide community resilience for the future. This process followed the guidelines for Phases 1 and 2 of the North Carolina Resilient Coastal Communities Program; a four-phase program to help communities maintain quality of life and build resilience to natural hazards. The four phases are summarized below:

Phase 1 – Community engagement, risk and vulnerability assessment

Phase 2 – Planning, Project Identification, and Prioritization

Phase 3 – Engineering and Design

Phase 4 – Implementation

This study describes the process and results of the Phases 1 and 2 implementations. Phase 1 aimed to engage the community through the creation of a Community Action Team (CAT) and to solicit active input and involvement from local citizens. Based on this input, as well as from prior studies and publicly available data, an identification and vulnerability assessment were performed to classify risk of critical infrastructure on Hatteras Island. Phase II leveraged that analysis and public input to generate a list of potential resiliency projects. Identified projects included potential future projects as well as projects that have been recently implemented or are ongoing. Additional input from the community was received for ranking and prioritization. Finally, of the 15 identified projects, a portfolio of 13 projects was created to describe the prioritized projects. Those projects are summarized below:

Table 1 - Project Portfolio (Part 1 of 5)

Priority Rating	Project Name	Description
High	Storm Drainage Maintenance (Ditch Maintenance)	Work with private landowners and NCDOT to ensure maintenance of drainage ditches throughout the county and maximize the capability of existing drainage systems and minimize flooding from rainfall and poor drainage. The county has made a significant effort but does not have a permanent funding source. This was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 4 and was identified as a common concern in the citizen survey. The county has existing mapping of the major drainage ways throughout the county and institutional knowledge of problem areas. This project would provide funding to establish a program and plan to work with NCDOT to implement a maintenance program to target priority roadside ditches and structures, including the hot spots identified in the citizen surveys. In the project prioritization process, this project was selected as the top priority by both the CAT and citizens.
High	Guinea Mill Run Drainage Improvements - Culvert and Channel Modifications	Full design, permitting, and implementation of upsized culverts and channels in Guinea Mill Run. This project works to improve drainage in the Guinea Mill Run watershed outside of Moyock. This area was identified as a hot spot in the first citizen survey and has been a known problem area. In 2018, a Guinea Mill Run Hydrology and Hydraulics study was completed by the US Army Corps of Engineers through the Planning Assistance to States program That study recommended "Improvement Plan 3." This plan included clearing and snagging of all the canals, modification of culvert structures and channel modification of Guinea Mill Run Canal.



Table 2 - Project Portfolio (Part 2 of 5)

Priority Rating	Project Name	Description
High	Moyock Area Drainage Study	Drainage study and improvements of the Moyock township. This project was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 1. Additionally, the general area and several of the specific drainages were identified as hot spots in the citizen survey. NC 168 runs through Moyock and in many locations limits drainage from the areas of Moyock west of NC 168. Drainages to be included in this study include: Eagle Creek, Western Canal, and Roland Creek Canals; Moyock Service District ditches #1-6; Ranchland drainage; Baxter Lane Ditch; Newtown Area Ditches; Survey Road ditch to Roland Creek; Summit Farms culvert and ditches; and NC 168 culverts.
High	Tulls Creek Road Area Improvements Study	Drainage/road improvement study and implementation of recommended improvements for the Old Tulls Creek Rd, Tulls Creek Rd, and Rocky Top Rd area. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. The study would evaluate different options of drainage improvements and elevating the roadway to reduce the risk of roads being inundated for extended periods. For optimal project success this study should be done in coordination with NCDOT.
Medium	Public Education and Outreach Program	A targeted education and outreach program regarding the benefit of natural areas and flood risk, preparedness, insurance and mitigation. In the Outer Banks Hazard Mitigation Plan actions #CUR34 and CUR#35 were to send targeted outreach to repetitive loss property owners and pre-FIRM property owners, respectively. OBXHMP action #CUR31 was to educate property owners on the natural and beneficial functions of floodplains, watersheds, and other natural/coastal areas. FIRM education and Outreach was also identified as Housing Action 3 in the Currituck County Resilient Redevelopment Plan. High levels of public awareness and resulting preparedness for disaster events improves resiliency by either mitigating the potential effects of a storm event or improving the recovery as a result of advance preparations and measures such as flood insurance.
Medium	Stormwater Pump Stations	The design and installation of three stormwater pump stations to reduce flooding from stormwater in canals at Ranchland Drive and Green View Road/Eagle Creek subdivision This project was identified in the Currituck County Resilient Redevelopment Plan as Housing Action 2. Canals in northern Currituck County drain to a single crossing of NC 168, which leads to flooding in residential areas along canals during storm events. The installation of the three pump stations would serve to alleviate the strain on this crossing and reduce flooding in several Moyock area hot spots identified in the citizen survey.



Table 3 - Project Portfolio (Part 3 of 5)

Priority Rating	Project Name	Description
Medium	Outer Banks Outfalls	Installation of stormwater outfalls for large storm events along the Currituck Outer Banks. This project was identified in the Currituck County Resilient Redevelopment Plan as Economic Development Action 1. Following significant storms, such as hurricanes and tropical storms, many residential areas on the Currituck Outer Banks remain flooded for several days because water has nowhere to run off to and the soil cannot infiltrate further. This project would include design and then acquiring portable generators, a portable stormwater pump station to assist in removing stormwater from these areas, and installation of permanent outfall pipes to the Atlantic Ocean. These outfalls would be capped on both ends during normal conditions and used only in an emergency when the State permits pumping to the ocean. The County would also require a Coastal Area Management Act (CAMA) major permit to install the outfalls and easements on private property for the pumps. Outer Banks residential areas were identified as hot spots in the citizen survey and flooding and the resulting limited access to the area has a detrimental impact on the County's as this area is primarily rental properties and vacation homes.
Medium	Sewer Feasibility Study	A long-term feasibility study of possible solutions, potential cost, and funding options for future sewer and septic system replacement and repair throughout the county. Concern over pollution from failing sewer systems (specifically Eagle Creek, Waterfront Drive), was an issue raised in the citizen survey. Although some fixes are underway, rising groundwater and increased flooding events will likely increase the frequency of sewer system failures in the future.
Medium	Marsh Sill and Shoreline Restoration - Coinjock Bay	Shoreline restoration uses techniques such as installation of marsh sills, plantings, and oyster bags or rock to stabilize the shoreline. This project includes design and installation of approximately 770 LF of shoreline restoration at 3581 Caratoke Hwy. A marsh sill and shoreline restoration at this location serves to protect the roadway and has the potential to be developed as a public water access. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds. Additionally, shoreline stabilization and marsh restoration are identified as Outer Banks Hazard Mitigation Plan actions #CUR11 and #CUR12; to pursue shoreline stabilization projects and regular shoreline monitoring and prioritization of marsh restoration planning and design for storm surge mitigation benefits.



Table 4 - Project Portfolio (Part 4 of 5)

Priority Rating	Project Name	Description
Medium	Bells Island Road Shoreline Protection	Living shorelines use plantings and other natural elements such as oyster bags or rock to stabilize the shoreline. This project proposes to design and install living shorelines along a 4,500 LF stretch of Bells Island Rd. A living shoreline at this location serves to protect the roadway which was identified as a hot spot in the citizen survey. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds. Additionally, shoreline stabilization and marsh restoration are identified as Outer banks Hazard Mitigation Plan actions #CUR11 and #CUR12; to pursue shoreline stabilization projects and regular shoreline monitoring and prioritization of marsh restoration planning and design for storm surge mitigation benefits.
Medium	Bells Island Road Improvements Study	Drainage/road improvement study and implementation of recommended improvements for Bells Island Rd. This project would fund a study to evaluate alternatives for elevating Bells Island Road to reduce risk of being inundated during flood events. Bells Island Rd is the only land access to the Bells Island area, so inundation of the roadway can cut off access or create unsafe driving conditions for individuals who attempt to drive the road anyway. This could be done in conjunction with, or in place of, the Bells Island Road Shoreline Protection project. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. For optimal project success this study should be done in coordination with NCDOT.
Medium	Knotts Island Marsh Causeway Improvements Study	Drainage/road improvement study and implementation of recommended improvements for the Knotts Island Marsh Causeway. This project would provide funding for a study to evaluate alternatives for elevating Marsh Causeway to reduce risk of being inundated during flood events. The Knotts Island Marsh Causeway is the only land access to Knotts Island, so inundation of the roadway can severely limit access, requiring use of the ferry or create unsafe driving conditions for individuals who attempt to drive the road anyway. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. For optimal project success this project should be completed in coordination with NCDOT.



Table 5 - Project Portfolio (Part 5 of 5)

Priority Rating	Project Name	Description
Medium	Waterlily Road Improvements Study	Drainage/road improvement study and implementation of recommended improvements for the Waterlily Road. This project would provide funding for a study to evaluate alternatives for elevating Waterlily Road to reduce risk of being inundated during flood events. Waterlily Rd is the only land access to the Piney Island and Church Island Area, so inundation of the roadway can cut off access or create unsafe driving conditions for individuals who attempt to drive the road anyway. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 3. Additionally, the project area was identified as a hot spot in the citizen survey. For optimal project success this project should be completed in coordination with NCDOT.



Acknowledgements

The view and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government or the National Fish and Wildlife Foundation and its funding sources. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government, or the National Fish and Wildlife Foundation or its funding sources.





Table of Contents

Executive Summary.....	i
Acknowledgements.....	vi
Introduction.....	1
Phase 1.....	1
Step 1: Develop a Community Action Team.....	1
Step 2: Set Vision and Goals.....	2
Step 3: Review Existing Local Plans and Efforts.....	2
Step 4: Develop a Community Engagement Strategy.....	3
Step 5: Map Critical Assets and Natural Infrastructure.....	4
Step 6: Conduct a Risk and Vulnerability Assessment.....	8
Phase 2.....	12
Potential Solutions.....	12
Project Portfolio.....	16
References.....	30

List of Tables

Table 1 - Project Portfolio (Part 1 of 5).....	i
Table 2 - Project Portfolio (Part 2 of 5).....	ii
Table 3 - Project Portfolio (Part 3 of 5).....	iii
Table 4 - Project Portfolio (Part 4 of 5).....	iv
Table 5 - Project Portfolio (Part 5 of 5).....	v
Table 6 - Community Action Team Members.....	1
Table 7 - Resource List (Part 1 of 2).....	2
Table 8 - Resource List (Part 2 of 2).....	3
Table 9 - Critical Assets (Part 1 of 5).....	4
Table 10 - Critical Assets (Part 2 of 5).....	5
Table 11 - Critical Assets (Part 3 of 5).....	6
Table 12 - Critical Assets (Part 4 of 5).....	7
Table 13 - Critical Assets (Part 5 of 5).....	8
Table 14 - Critical Asset Vulnerability (Part 1 of 3).....	9
Table 15 - Critical Asset Vulnerability (Part 2 of 3).....	10
Table 16 - Critical Asset Vulnerability (Part 3 of 3).....	11
Table 17 - Critical Infrastructure & Key Resources by Type.....	11
Table 18 - Critical Facilities Exposed to Flooding, Currituck County.....	11
Table 19 - Potential Projects (Part 1 of 3).....	12
Table 20 - Potential Projects (Part 2 of 3).....	13



Table 21 - Potential Projects (Part 3 of 3).....14

Table 22 - In-Progress Projects (Part 1 of 2).....14

Table 23 - In-Progress Projects (Part 2 of 2).....15

Table 24 - Project Prioritization (Part 1 of 2)15

Table 25 - Project Prioritization (Part 2 of 2)16

Table 26 - Portfolio Project #117

Table 27 - Portfolio Project #218

Table 28 - Portfolio Project #319

Table 29 - Portfolio Project #420

Table 30 - Portfolio Project #521

Table 31 - Portfolio Project #622

Table 32 - Portfolio Project #723

Table 33 - Portfolio Project #824

Table 34 - Portfolio Project #925

Table 35 - Portfolio Project #10.....26

Table 36 - Portfolio Project #11.....27

Table 37 - Portfolio Project #12.....28

Table 38 - Portfolio Project #13.....29

Appendices

Appendix A – CAT Meeting Agendas & Attendance List

Appendix B – OBX Hazard Mitigation Plan

Appendix C – Community Questionnaire Results

Appendix D – Maps

Map 1: National Wetlands Inventory (NWI)

Map 2: Critical Assets

Map 3: FEMA Special Flood Hazard Areas (SFHA)

Map 4: 1 ft Sea Level Rise Inundation Areas

Map 6: Storm Surge

Map 7: Erosion Rate – Hatteras Island

Appendix E – CDC Social Vulnerability Index

Data Attachments

GIS Maps and Data

Previous Study Reports



Introduction

The North Carolina Resilient Coastal Communities Program is a four-phase program to support communities in planning for and creating greater resiliency to coastal hazards. This report summarizes the efforts of phases one and two of the program. This included community engagement and a risk and vulnerability assessment in phase 1 and planning, project identification and prioritization in phase 2. Phases 3 and 4 are planned for the future and include engineering, design, and implementation of select priority projects.

Resiliency is vital to the health, safety, and prosperity of North Carolina’s coastal communities as increasingly intense storm events and sea level rise become more prevalent. Planning to strengthen our coastal community’s ability to withstand storm events and reduce flooding risk requires a multipronged and multidisciplinary approach to identify risks on a local level and developing solutions that mitigate risk and enable communities to respond and recover more quickly.

Currituck County is the most north-eastern county in North Carolina and is comprised of two main geographic sections, the Currituck Outer Banks and the Currituck Mainland. The Outer Banks and mainland are separated by the Currituck Sound, where Knotts Island is also located. From the Currituck mainland Knotts Island is accessed by ferry or driving through Virginia to the north and the Currituck Outer banks are accessed by a bridge at the southern end of the county. The Currituck Outer Banks and Knotts Island face increased risk because of the limited access and the Outer Banks function as a barrier island. The Currituck mainland consists of many low lying areas and historic drainage canal systems that are under increased pressure. Currituck County has a population of 28,100 people as of the 2020 Census. The economy of Outer Banks Currituck is primarily driven by the tourism industry and mainland Currituck is primarily the agricultural sector and industry.

Phase 1

Step 1: Develop a Community Action Team

The community action team (CAT) was selected to represent a diverse group of stakeholders with extensive experience responding to the hazards faced by Currituck County. The team includes county employees and elected officials who serve to represent the community and are intimately aware of the specific needs of the community. County employees also assisted in recommending other individuals to join the CAT. Representatives from HOA organizations and Stormwater Service Districts were included to represent the citizen perspective.

Table 6 - Community Action Team Members

Name	Organization	Position
Dylan Lloyd	Currituck County	Soil and Stormwater Manager
Steven Pyle	Currituck County	Deputy Emergency Management Coordinator
Laurie LoCicero	Currituck County	Planner
Mary “Kitty” Etheridge	Currituck County	County Commissioner
Manly West*	Soil and Water Conservation	Chairman
Wendy Shannon	Moyock Service District	Advisory Board Member
David Shepherd	Eagle Creek HOA	Vice President
Ronald Powell*	Samuel Chapel Holiness Church - Sligo	Church Leader
Jerry Wright*	Chamber of Commerce	Local Businessowner & Farmer

*Unable to attend CAT Meetings, but were included in correspondence



The CAT had two formal meetings during the development of this report. Meeting agendas and attendance lists can be found in Appendix A. The meetings were held on the following dates.

- December 3, 2021 – *Virtual*
- February 22, 2022 – *Virtual*

Step 2: Set Vision and Goals

The County Soil and Stormwater Manager and community action team collaborated to develop a community vision and goals for the risk and vulnerability assessment efforts. The vision and goals were developed with the intent to capture not only the natural hazards and challenges that Currituck County faces but also to highlight the necessity of a collaborative approach that informs and includes the public and varied stakeholders in the decision-making process.

THE COUNTY OF CURRITUCK HAS A VISION OF CREATING AN OPEN FORUM AND EXCHANGE, FROM EXPERTS AND LAYPEOPLE ALIKE, TOWARD THE DISCUSSION OF ISSUES AND DISCOVERY OF SOLUTIONS, AS THEY RELATE TO AN ONGOING MISSION OF ADDRESSING AND SOLVING CLIMATE RESILIENCY BARRIERS, IN THE INTEREST OF CREATING A DYNAMIC AND ROBUST STRATEGY TOWARD IDENTIFYING AND COMPLETING SHOVEL-READY PROJECTS, ULTIMATELY FORMING A PATH AND A PROCESS TOWARD ACHIEVING THE FOLLOWING GOALS:

- **PROTECTING AT-RISK POPULATIONS FROM FLOOD AND WIND DAMAGE**
- **DEFENDING CRITICAL ASSETS AND INFRASTRUCTURE FROM POTENTIAL LOSS**
- **CONSERVING LAND AND WATER RESOURCES FOR A SUSTAINABLE FUTURE**
- **INCORPORATING BEST-PRACTICES INTO LOCAL GOVERNMENT CODE AND POLICY**
- **CONTINUATION OF COMMUNITY ENGAGEMENT AND AWARENESS ON RESILIENCY**

Step 3: Review Existing Local Plans and Efforts

The Outer Banks Regional Hazard Mitigation Plan (OBXHMP) was recently completed in 2020 and was utilized as the basis for much of the risk assessment. The planning area for the Outer Banks Regional Hazard Mitigation Plan covers Currituck County and Dare County, including the incorporated towns. The hazards identified in the Outer Banks plan include natural and man-made disasters and risks. For the purpose of this resiliency study, a focus was placed on the natural disasters profiled in the plan. An excerpt from the Outer Banks Regional Hazard Mitigation Plan is attached in Appendix B. Additionally, the Hurricane Matthew Resilient Redevelopment Plan for Currituck County was integral in identifying potential projects.

In addition, Table 7 presents a complete list of documents that were reviewed as part of this effort.

Table 7 - Resource List (Part 1 of 2)

Document	Publication Date
2020 Beach Monitoring and Beach Stability Assessment: Currituck County, North Carolina	November 2020
Baxter Lane Stormwater Report	March 7, 2020
Currituck County - Coastal Resilience Rainfall Flood Study	August 14, 2018
Currituck County Agricultural Development Plan	December 2017
Currituck County Flood Risk Perception Study	April 25, 2018
Currituck County Watershed Protection Plan Soil and Water Conservation	2021
Currituck Sound Coalition: Marsh Conservation Plan	November 2021
Draft Narrative Water Quality Monitoring and Remediation Currituck Sound Watersheds	July 2020
Guinea Mill Run Planning Assistance to States Hydrology and Hydraulics Study	October 2018
Hurricane Matthew Resilient Redevelopment Plan: Currituck County	May 2017
Outer Banks Hazard Mitigation Plan	June 2020



Table 8 - Resource List (Part 2 of 2)

Document	Publication Date
Pasquotank River Basin Restoration Priorities	September 2009
SAVE Currituck Sound: Submerged Aquatic Vegetation Evaluation in Currituck Sound, NC	May 2020

Step 4: Develop a Community Engagement Strategy

As identified in the vision and goals, community engagement and support is important to success of resiliency solutions. Currituck County has 22 unincorporated communities spread across the county. The preferred approach to community engagement would have been to hold town hall style in person meetings in some of the larger communities. However, due to the COVID-19 pandemic, it was decided that in person meetings were not a viable option. There was successful in-person community engagement in the development of the Outer Banks Hazard Mitigation Plan, which occurred prior to the COVID-19 pandemic, and was heavily relied upon in this assessment report. In an effort to prevent redundancy and in response to the pandemic, surveys were utilized to get maximum community insight with minimum public health risk and effort required of community members.

An initial survey was conducted to gather community insight as to what hazards are most important to the community as well as general attitudes regarding potential resiliency efforts and types of projects. The survey was promoted via email list-serv, flyers in public locations, and a geo-targeted Facebook ad campaign.

The survey was published December 28th, 2021 and closed January 25th, 2022. A total of 921 responses were received with 737 of those being permanent residents of Currituck County and 152 non-resident property owners. See Appendix C for the full survey and results. Some key learnings from the survey included

- Most residents know if their property is in a floodplain or not
- The three most significant threats (per public perception) are Flooding due to Heavy Rain, Tropical Weather Systems, and Drainage Issues
- The three least significant threats (per public perception) are Saltwater intrusion, Extreme temperatures, and Drought
- Ability of Currituck County to withstand and recover from minor storms and limited flooding
 - ~76% able or completely able
 - ~14% unable or somewhat unable
- Ability of Currituck County to withstand and recover from major storms and extensive flooding
 - ~48% able or completely able
 - ~39% unable or somewhat unable
- Demographic Summary
 - ~84% older adults
 - ~10% low-income individuals
 - ~13% People with disabilities
 - ~5% People of racial or ethnic minorities
- Environmental Issues affect disproportionate sectors of the community
 - Largely Yes to Low-income individuals, Older adults, and people with disabilities
 - No to People of racial or ethnic minorities
- An open-ended question asking which areas are most affected by environmental issues was used to identify hot spot locations. There was a total of 459 Individual responses. Locations receiving 15 or more mentions were identified as “hot spots” and are listed below
 - Ocean Sands (69)
 - Carova (28)
 - Tulls Creek Rd (27)



- Corolla (21)
- Moyock (17)
- Poyners Rd (16)
- 4x4 Area (15)
- Eagle Creek (15)
- The five most effective flood protection measures (per public perception) are Resilient construction standards, Elevating structures, Land use planning, Dune restoration, and Utilities redundancy & backup
- The five least effective flood protection measures (per public perception) are Flood gates, Flood walls, Shallow groundwater pumping (before storms), Earthen levees, and Engineered beaches (beach nourishment)
- Another open-ended response was given for citizens to express any additional concerns. There was a total of 144 individual responses, with the following themes
 - Bridge to Corolla/Mid-Currituck Bridge
 - Eagle Creek Sewage System
 - Waterfront Dr – Raw sewage runoff to sound
 - Algae Bloom at water treatment plant on Mila Drive, Septic?
 - Drainage Canals
 - Older neighborhoods flood due to new neighborhoods

Following development of the project list, a second citizen survey was conducted to garner public input on prioritization of the proposed projects. Individuals who submitted their contact information at the end of the first survey (a total of 165 emails were submitted for follow up) were sent this second follow up survey. The survey was opened March 8th, 2022 and closed March 16th, 2022. A total of 55 responses were received. The survey listed each project idea and asked respondents to rank them as Lowest Priority, Low Priority, Neither Low Priority nor High Priority, High Priority, or Highest Priority. See Appendix C for the full survey and results. Discussion of the results is included in the following Phase 2 Project Prioritization section.

Step 5: Map Critical Assets and Natural Infrastructure

The critical assets selected for mapping included public buildings, emergency response facilities, and critical infrastructure. A shapefile of critical assets that were identified in the Outer Banks Hazard Mitigation Plan was obtained and used as the basis of the critical asset inventory. Additional critical assets were added from information obtained via NC OneMap, critical transportation features, and natural features. A full list of critical assets and infrastructure mapped is included in Table 9, below, and mapped on Appendix D - Exhibit 2.

Table 9 - Critical Assets (Part 1 of 5)

Asset ID #	Asset Description	Location	Town	Ownership	Hazards	Estimated Value	SFHA	500 yr flood	1' SLR	1 ft Future Storm Surge
1	Educational - Moyock Middle School	216 Survey Rd	Moyock	Public	flooding	\$9,674,600	No	No	No	No
2	Educational - Knotts Island Elementary School	413 Woodleigh Rd	Knotts Island	Public	flooding	\$830,744	No	No	No	No
3	Educational - Moyock Elementary School	255 Shingle Landing Rd	Moyock	Public	flooding	\$5,612,600	Yes	No	No	Yes
4	Educational - Currituck County High School	4203 Caratoke Hwy	Barco	Public	flooding	\$10,882,048	Yes	Yes	No	Yes
5	Educational - Griggs Elementary School	261 Poplar Branch Road	Poplar Branch	Public	flooding	\$6,654,200	No	No	No	No



Table 10 - Critical Assets (Part 2 of 5)

Asset ID #	Asset Description	Location	Town	Owner ship	Hazards	Estimated Value	SFHA	500 yr flood	1' SLR	1 ft Future Storm Surge
6	Educational - JP Knapp Early College	2966 Caratoke Highway	Currituck	Public	flooding	\$3,597,400	No	No	No	No
7	Educational - Jarvisburg Elementary School	110 Jarvisburg Road	Jarvisburg	Public	flooding	\$10,265,089	No	No	No	No
8	Educational - Shawboro Elementary School	370 Shawboro Rd	Shawboro	Public	flooding	\$13,368,916	No	Yes	No	No
9	Educational - Central Elementary School	504 Shortcut Road	Barco	Public	flooding	\$68,148	No	No	No	No
10	Educational - Currituck County Middle School	4263 Caratoke Hwy	Barco	Public	flooding	\$6,874,700	Yes	Yes	No	Yes
11	Communications - Historic Courthouse Radio Tower	Historic Courthouse	Currituck	Public	flooding, high wind		No	No	No	No
12	Communications - Barco Radio Tower	Barco	Barco	Public	flooding, high wind	\$818,600	Yes	Yes	No	Yes
13	Communications - Knotts Island Radio Tower	Knotts Island	Knotts Island	Public	flooding, high wind		No			No
14	Communications - Corolla Radio Tower	Corolla	Corolla	Public	flooding, high wind		No			Yes
15	Emergency Services - Carova Beach Fire Station 7	2169 Ocean Pearl Road	Corolla	Public	flooding, sea level rise	\$159,768	No	Yes	No	No
16	Emergency Services - Corolla Fire Station 6	470 Ocean Trail	Corolla	Public	flooding, sea level rise	\$1,760,119	No	No	No	Yes
17	Emergency Services - 911 Communications Center/Emergency Operations/Govt Center	147 Courthouse Road	Currituck	Public	flooding	\$818,600	No	No	No	No
18	Emergency Services - Lower Currituck Fire Station 2	424 Waterlily Rd	Coinjock	Public	flooding	\$457,329	Yes	Yes	No	Yes
19	Emergency Services - Crawford Fire Station 4C (612 Shortcut)	613 Shortcut Rd	Maple	Public	flooding	\$144,928	No	No	No	No
20	Emergency Services - Crawford Fire Station 4B (2950 Caratoke)	2950-A Caratoke Hwy	Currituck	Public	flooding	\$231,763	No	No	No	No
21	Emergency Services - Crawford Fire Station 4A (121 Shawboro)	121 Shawboro Rd	Moyock	Public	flooding	\$831,535	Yes	Yes	No	Yes
22	Emergency Services - Moyock Fire Station 3	108 Fire Station Court	Moyock	Public	flooding	\$1,859,268	No	No	No	Yes



Table 11 - Critical Assets (Part 3 of 5)

Asset ID #	Asset Description	Location	Town	Owner ship	Hazards	Estimated Value	SFHA	500 yr flood	1' SLR	1 ft Future Storm Surge
23	Emergency Services - Knotts Island Fire Station 15	327 Knotts Island Rd	Knotts Island	Public	flooding	\$539,900	No	No	No	No
24	Emergency Services - Corolla Fire Station 61 (Whalehead)	827 Whalehead Dr.	Corolla	Public	flooding, sea level rise	\$280,023	No	No	No	Yes
25	Emergency Services - Lower Currituck Fire Station 1	8336 Caratoke Hwy	Powells Point	Public	flooding	\$462,397	No	No	No	No
26	Emergency Services - Lower Currituck Fire Station 5	6323 Caratoke Hwy	Grandy	Public	flooding	\$2,553,006	No	No	No	No
27	Currituck County Public Safety Center (Emergency Services - Sheriffs Office Mainland & County Jail)	125 College Way	Barco	Public	flooding	\$3,248,700	No	No	No	No
28	Emergency Services - Sheriffs Office Knotts Island	633 Knotts Island Road	Knotts Island	Public	flooding		No	No	No	No
29	Currituck County Corolla Satellite Office (Emergency Services - Sheriffs Office Corolla & Corolla Branch Library)	1123 Ocean Trail	Corolla	Public	flooding, sea level rise	\$1,221,619	No	No	No	No
30	Government - County Animal Shelter	140 Aviation Parkway	Barco	Public	flooding	\$2,549,627	No	No	No	No
31	Government - Judicial Center	2801 Caratoke Highway	Currituck	Public	flooding	\$3,543,736	No	No	No	No
32	Utilities - Pump Station	160 Newtown Rd	Moyock	Public	flooding	\$16,000	No	No	No	No
33	Utilities - Pump Station	106 Caratoke Hwy	Moyock	Public	flooding	\$63,253	No	No	No	No
34	Utilities - Pump Station Sligo		Sligo	Public	flooding		Yes			Yes
35	Utilities - Currituck Tank	2519 Tulls Creek Rd	Currituck	Public	flooding	\$1,275,000	No	No	No	No
36	Utilities - Grandy Tank	104 Walnut Island Blvd	Grandy	Public	flooding	\$1,254,400	No	No	No	No
37	Government - Public Works Department	145 Courthouse Road	Currituck	Public	flooding	\$818,600	No	No	No	No
38	Currituck County Regional Airport	264 Airport Road	Maple	Public	flooding	\$3,248,700	No	No	No	No
39	Currituck County Detention Center	407 Maple Road	Maple	Public	flooding	\$2,026,100	No	No	No	No



Table 12 - Critical Assets (Part 4 of 5)

Asset ID #	Asset Description	Location	Town	Ownership	Hazards	Estimated Value	SFHA	500 yr flood	1' SLR	1 ft Future Storm Surge
40	East Albemarle Regional Library - Currituck County Library	4261 Caratoke Highway	Barco	Public	flooding	\$1,025,272	Yes	Yes	No	Yes
41	Utilities - Currituck County Water and Sewer	444 Maple Road	Maple	Public	flooding	\$912,700	No	No	No	No
42	Utilities - Southern Outer Banks Water and Sewer	734 Ocean Trail	Corolla	Public	flooding, sea level rise	\$6,680,700	Yes	Yes	No	Yes
43	Utilities - High Cotton Tank	149 Southern Pine Dr	Moyock	Public	flooding	\$300,000	Yes	Yes	No	Yes
44	Utilities - Moyock Tank	131 Shingle Landing Rd	Moyock	Public	flooding	\$667,600	No	No	No	No
45	Utilities - Corolla Light Tank	1099 Ocean Trail	Corolla	Public	flooding, sea level rise	\$109,000	No	No	No	No
46	Utilities - Ocean Sands Tank	Ocean Trail and Sandfiddler Ct	Corolla	Public	flooding, sea level rise	\$300,000	No	No	No	Yes
47	Utilities - Pine Island Water Plant and Tank	468 Ocean Trail	Corolla	Public	flooding, sea level rise	\$1,081,400	No	No	No	No
48	Utilities - Currituck Industrial Park Tank/Powells Point Radio Tower	201 Fox Knoll Dr	Powells Point	Private	flooding	\$300,000	No	No	No	No
49	Utilities - Coinjock Water Main			Public	flooding		Yes	Yes	Yes	Yes
50	Natural - Currituck Beaches			Public	flooding, sea level rise		Yes	Yes	Yes	Yes
51	Moyock Regional Wastewater Treatment Plant	Moyock Landing Dr	Moyock	Public	flooding	\$347,000	No	No	No	No
52	Waters Edge Village School		Corolla	Private	flooding, sea level rise	\$46,908	No	Yes	No	Yes
53	Currituck Ferry Terminal		Currituck	Public	flooding	\$204,000	Yes	Yes	Yes	Yes
54	Knotts Island Ferry Terminal		Knotts Island	Public	flooding	\$70,700	No	Yes	Yes	No
55	Utilities - East Willet Ct	East Willet Ct	Corolla	Public	flooding, sea level rise		No	No	No	Yes
56	Utilities - Monterey Dr	Monteray Dr	Corolla	Public	flooding, sea level rise	\$ 869,322	No	No	No	No
57	Utilities - Sailfish Parking	Sailfish St & Whalehead Dr	Corolla	Public	flooding, sea level rise		No	No	No	No
58	Utilities - Sturgeon Beach Access		Corolla	Public	flooding, sea level rise		No	No	No	No



Table 13 - Critical Assets (Part 5 of 5)

Asset ID #	Asset Description	Location	Town	Owner ship	Hazards	Estimated Value	SFHA	500 yr flood	1' SLR	1 ft Future Storm Surge
59	Utilities - Shad Beach Access	Shad St & Whalehead Dr	Corolla	Public	flooding, sea level rise		No	No	No	No
60	Utilities - East Shad St	East End of Shad St	Corolla	Public	flooding, sea level rise		No	No	No	Yes
61	Utilities - 1113 Franklyn St	1113 Franklyn St	Corolla	Public	flooding, sea level rise		No	No	No	Yes
62	Utilities - Whalehead Club		Corolla	Public	flooding, sea level rise		Yes	Yes	Yes	Yes
63	Utilities - Ocean Hill Ct		Corolla	Public	flooding, sea level rise		No	No	No	No

Step 6: Conduct a Risk and Vulnerability Assessment

Physical Vulnerability

The Outer Banks Regional Hazard Mitigation Plan identified 23 different hazards. The community action team chose to focus on the hazards of flooding, storm surge, sea level rise, erosion, and impaired water quality. Flooding hazards were determined by the Special Flood Hazard Areas mapped by FEMA as part of the National Flood Insurance Program and maintained in North Carolina by the North Carolina Floodplain Mapping Program. The current flood maps for Currituck County were made effective 12/21/2018. Storm surge was assessed as the storm surge inundation associated with a category 2 hurricane in the National Storm Surge Hazard Maps – Version 2 by NOAA’s National Hurricane Center. Sea level rise data was derived from the NOAA Sea Level Rise Viewer. NC Division of Coastal Management 2020 Erosion and Accretion rates were used for coastal erosion mapping. These hazards were mapped with the critical assets and large-scale exhibits are included in Appendix D.

Social Vulnerability

The Centers of Disease Control and Prevention (CDC) Agency for Toxic Substances and Disease Registry (ATSDR) develops a Social Vulnerability Index (SVI) based off fifteen census-derived factors. The purpose of the SVI is to help identify communities that may be more vulnerable and require more assistance in responding to disaster. The SVI has four themes, Socioeconomic Status, Household Composition, Race/Ethnicity/Language, and Housing/Transportation. Socioeconomic status is determined by the factors of poverty, unemployed, per capita income, and no high school diploma. Household composition/disability is comprised of the factors of aged 65 and over, aged 17 and younger, single-parent household, and aged 5 and over with a disability. Race/Ethnicity/Language is determined by the factors of minority and English language ability. Housing type/Transportation is comprised of the factors of multi-unit, mobile homes, crowding, no vehicle, and group quarters. The prepared Currituck County Map can be found in Appendix E.

The SVI is prepared by census tract and Currituck County is comprised of seven census tracts. The CDC overall SVI score for all of Currituck County is 0.1194 (low vulnerability). For the socioeconomic theme Currituck County scores 0.2742 (low to moderate vulnerability), household composition/disability theme scores 0.2649 (low to moderate vulnerability), minority language theme score is 0.3047 (low to moderate vulnerability), and housing/transportation score is 0.0579 (low vulnerability). Although the overall SVI scores report low to moderate vulnerability for the county there are census areas along the sound and southern peninsula that have moderate to high vulnerability. Natural disaster is a significant source of vulnerability that affects everyone in Currituck County. Older age was also a significant factor that was shared by many of the respondents in the survey. Additionally, based on the citizen survey, continued availability of



affordable housing for permanent residents and proper planning for social services alongside increased development are two specific concerns of social vulnerability.

Critical Asset Vulnerability Assessment

In addition to determining the overall social vulnerability of the island population, the vulnerability of each critical asset was assessed using a vulnerability index, combining exposure, sensitivity, and adaptive capacity. The table below documents the vulnerability score of each asset. The vulnerability score is calculated by adding the exposure score and sensitivity score and subtracting the adaptive capacity.

Exposure – Exposure was determined based on the 100 year FEMA flood zone, 500 year FEMA food zone, 1’ of sea level rise, and at least 1’ of storm surge. An exposure score of 0 was assigned to assets located entirely outside of the flood zones and not impacted by sea level rise or storm surge. A value of 1 was assigned to assets affected by one of the factors, 2 was assigned to assets affected by 2 of the factors, 2.5 was assigned to assets affected by 3 of the factors, and 3 was assigned to assets affected by all four factors.

Sensitivity – the sensitivity score seeks to quantify to what degree an asset is impacted by the hazards. The scores were primarily determined by the sensitivity to flooding (from any source, i.e. rainfall, tropical storm, storm surge), sensitivity to high winds, and typical design standards per service use classification. A score of 1 was given to assets that were not likely to experience damage or a service disruption in a flooding event, a 2 for assets that may be affected, and a 3 for assets that would likely be damaged or have a service disruption in a flooding event.

Adaptivity – man made infrastructure tends to be static and natural infrastructure is typically much more dynamic, the adaptivity score seeks to capture the ability of assets to change in response to a hazard. No consideration was given to the likelihood or frequency of being impacted by a hazard, but rather the assets ability to respond to the hazard. Natural infrastructure was scored the highest with large or extensive man-made infrastructure scoring the lowest.

Table 14 - Critical Asset Vulnerability (Part 1 of 3)

Asset ID #	Asset Description	Exposure Score (0-3)	Sensitivity Score (0-3)	Adaptive Capacity Score (0-3)	Vulnerability Score (0-6)
1	Educational - Moyock Middle School	0	3	1	2
2	Educational - Knotts Island Elementary School	0	3	1	2
3	Educational - Moyock Elementary School	2	3	1	4
4	Educational - Currituck County High School	2.5	3	1	4.5
5	Educational - Griggs Elementary School	0	3	1	2
6	Educational - JP Knapp Early College	0	3	1	2
7	Educational - Jarvisburg Elementary School	0	3	1	2
8	Educational - Shawboro Elementary School	1	3	1	3
9	Educational - Central Elementary School	0	3	1	2
10	Educational - Currituck County Middle School	2.5	3	1	4.5
11	Communications - Historic Courthouse Radio Tower	0	1	0	1
12	Communications - Barco Radio Tower	2.5	1	0	3.5
13	Communications - Knotts Island Radio Tower	0	1	0	1
14	Communications - Corolla Radio Tower	1	1	0	2
15	Emergency Services - Carova Beach Fire Station 7	1	2	1	2
16	Emergency Services - Corolla Fire Station 6	1	2	1	2
17	Emergency Services - 911 Communications Center/Emergency Operations/Govt Center	0	3	1	2
18	Emergency Services - Lower Currituck Fire Station 2	2.5	2	1	3.5
19	Emergency Services - Crawford Fire Station 4C (612 Shortcut)	0	2	1	1



Table 15 - Critical Asset Vulnerability (Part 2 of 3)

Asset ID #	Asset Description	Exposure Score (0-3)	Sensitivity Score (0-3)	Adaptive Capacity Score (0-3)	Vulnerability Score (0-6)
20	Emergency Services - Crawford Fire Station 4B (2950 Caratoke)	0	2	1	1
21	Emergency Services - Crawford Fire Station 4A (121 Shawboro)	2.5	2	1	3.5
22	Emergency Services - Moyock Fire Station 3	1	2	1	2
23	Emergency Services - Knotts Island Fire Station 15	0	2	1	1
24	Emergency Services - Corolla Fire Station 61 (Whalehead)	1	2	1	2
25	Emergency Services - Lower Currituck Fire Station 1	0	2	1	1
26	Emergency Services - Lower Currituck Fire Station 5	0	2	1	1
27	Currituck County Public Safety Center (Emergency Services - Sheriffs Office Mainland & County Jail)	0	3	1	2
28	Emergency Services - Sheriffs Office Knotts Island	0	2	1	1
29	Currituck County Corolla Satellite Office (Emergency Services - Sheriffs Office Corolla & Corolla Branch Library)	0	3	1	2
30	Government - County Animal Shelter	0	3	1	2
31	Government - Judicial Center	0	3	1	2
32	Utilities - Pump Station	0	1	1	0
33	Utilities - Pump Station	0	1	1	0
34	Utilities - Pump Station Sligo	2	1	1	2
35	Utilities - Currituck Tank	0	1	1	0
36	Utilities - Grandy Tank	0	1	1	0
37	Government - Public Works Department	0	3	1	2
38	Currituck County Regional Airport	0	2	1	1
39	Currituck County Detention Center	0	3	1	2
40	East Albemarle Regional Library - Currituck County Library	2.5	3	1	4.5
41	Utilities - Currituck County Water and Sewer	0	1	1	0
42	Utilities - Southern Outer Banks Water and Sewer	2.5	1	1	2.5
43	Utilities - High Cotton Tank	2.5	1	1	2.5
44	Utilities - Moyock Tank	0	1	1	0
45	Utilities - Corolla Light Tank	0	1	1	0
46	Utilities - Ocean Sands Tank	1	1	1	1
47	Utilities - Pine Island Water Plant and Tank	0	1	1	0
48	Utilities - Currituck Industrial Park Tank/Powells Point Radio Tower	0	1	1	0
49	Utilities - Coinjock Water Main	3	1	0	4
50	Natural - Currituck Beaches	3	0	3	0
51	Moyock Regional Wastewater Treatment Plant	0	1	1	0
52	Waters Edge Village School	2	3	1	4
53	Currituck Ferry Terminal	3	1	2	2
54	Knotts Island Ferry Terminal	2	1	2	1
55	Utilities - East Willet Ct	1	1	1	1
56	Utilities - Monterey Dr	0	1	1	0
57	Utilities - Sailfish Parking	0	1	1	0
58	Utilities - Sturgeon Beach Access	0	1	1	0



Table 16 - Critical Asset Vulnerability (Part 3 of 3)

Asset ID #	Asset Description	Exposure Score (0-3)	Sensitivity Score (0-3)	Adaptive Capacity Score (0-3)	Vulnerability Score (0-6)
59	Utilities - Shad Beach Access	0	1	1	0
60	Utilities - East Shad St	1	1	1	1
61	Utilities - 1113 Franklyn St	1	1	1	1
62	Utilities - Whalehead Club	3	1	1	3
63	Utilities - Ocean Hill Ct	0	1	1	0

An asset inventory summarizing at-risk critical infrastructure and asset values by sector was prepared for the Outer Banks Regional Hazard Mitigation Plan. Table A.4 summarizes the number of critical infrastructure and key resources from IRISK by type and Table A.17 summarizes the number of buildings at risk and corresponding asset value for a 1% annual chance flood event. Those tables have been reproduced below.

Table 17 - Critical Infrastructure & Key Resources by Type

Jurisdiction	Food and Agriculture	Banking and Finance	Chemical & Hazardous	Commercial	Communications	Critical Manufacturing	EM	Healthcare	Government Facilities	Nuclear Reactors, Materials and Waste	Postal and Shipping	Transportation Systems	Energy	Emergency Services	Water	Total
Currituck County	431	20	1	758	3	144	0	29	117	1	0	161	4	16	19	1,704

Source: Outer Banks Regional Hazard Mitigation Plan 2020

Table 18 - Critical Facilities Exposed to Flooding, Currituck County

Sector	# of Buildings at Risk	Estimated Damages
Food and Agriculture	41	\$136,631
Commercial Facilities	36	\$768,397
Critical Manufacturing	5	\$21,547
Government Facilities	4	\$107,252
Transportation Systems	5	\$22,834
All Categories	91	\$1,056,661

Source: Outer Banks Regional Hazard Mitigation Plan 2020



Phase 2

Potential Solutions

Through a review of the resources and previous studies, initial potential resiliency projects were identified. Then the Community Action Team brainstormed additional project ideas and reviewed what progress had already been made on previously identified projects. Finally, the citizen survey results were used to guide the chosen implementation locations and prioritization of projects. Fifteen potential projects were identified, and five additional projects were identified as currently in progress. The initial proposed project list is provided in tables below.

Table 19 - Potential Projects (Part 1 of 3)

Project Name	Project Description
Stormwater Pump Stations	This project was identified in the Currituck County Resilient Redevelopment Plan as Housing Action 2. <i>"Canals in northern Currituck County drain to a single crossing of NC 168, which leads to flooding in residential areas along canals during storm events. This project would include installation of three stormwater pump stations to reduce flooding from stormwater in canals at Ranchland Drive and Green View Road/Eagle Creek subdivision."</i>
Marsh Sill and Shoreline Restoration - Coinjock Bay	Marsh Sills at 3581 Caratoke Hwy - a marsh sill and shoreline restoration at this location serves to protect the roadway and has the potential to be developed as a public water access. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds. Additionally, shoreline stabilization and marsh restoration are identified as Outer Banks Hazard Mitigation Plan actions #CUR11 and #CUR12 <i>"Work to pursue shoreline stabilization projects and regular shoreline monitoring"</i> and <i>"Currituck Sound Coalition will prioritize marsh restoration planning and design for storm surge mitigation benefits."</i>
Marsh Sills - Tulls Creek Rd	Marsh sills at 1485 Tulls Creek Rd - a marsh sill at this location serves to protect the roadway and additional water quality benefits. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds. Additionally, shoreline stabilization and marsh restoration are identified as Outer banks Hazard Mitigation Plan actions #CUR11 and #CUR12 <i>"Work to pursue shoreline stabilization projects and regular shoreline monitoring"</i> and <i>"Currituck Sound Coalition will prioritize marsh restoration planning and design for storm surge mitigation benefits."</i>
Bells Island Road Shoreline Protection	A living shoreline at this location serves to protect the roadway which was identified as a hot spot in the citizen survey. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds. Additionally, shoreline stabilization and marsh restoration are identified as Outer banks Hazard Mitigation Plan actions #CUR11 and #CUR12 <i>"Work to pursue shoreline stabilization projects and regular shoreline monitoring"</i> and <i>"Currituck Sound Coalition will prioritize marsh restoration planning and design for storm surge mitigation benefits."</i>



Table 20 - Potential Projects (Part 2 of 3)

Project Name	Project Description
Sewer Feasibility Study	A long term feasibility study of possible solutions, potential cost, and funding options for future sewer and septic system replacement and repair throughout the county. Concern over pollution from failing sewer systems (specifically Eagle Creek, Waterfront Drive, was an issue raised in the citizen survey.
Storm Drainage Maintenance (Ditch Maintenance)	Work with private landowners and NCDOT to ensure maintenance of drainage ditches and maximize the capability of existing drainage systems and minimize flooding from rainfall and poor drainage. The county has made a significant effort but does not have a permanent funding source. This was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 4 and was identified as a common concern in the citizen survey. <i>"This project would provide funding to identify priority roadside ditches and drainage structures for maintenance and work with NCDOT to implement a maintenance program."</i>
Public Education and Outreach Program	A targeted education and outreach program regarding the benefit of natural areas and flood risk, preparedness, insurance and mitigation. In the OBXHMP actions #CUR34 and CUR#35 were to send targeted outreach to repetitive loss property owners and pre-FIRM property owners, respectively. OBXHMP action #CUR31 was to <i>"Educate property owners on the natural and beneficial functions of floodplains, watersheds, and other natural/coastal areas"</i> FIRM education and Outreach was also identified as Housing Action 3 in the Currituck County Resilient Redevelopment Plan.
Elevate Structures	Establish a grant program to provide assistance to elevate structures and homes that are currently below the BFE or are repetitive loss properties, to meet current ordinance requirements and protect against flooding and sea level rise.
Outer Banks Outfalls	This project was identified in the Currituck County Resilient Redevelopment Plan as Economic Development Action 1. <i>"Many residential areas on the Currituck County Outer Banks are private, with privately-maintained roads and water/sewer systems. Some of these areas stayed flooded for several days following Hurricane Matthew, which affects the County's economy as this area is primarily rental properties and vacation homes. This project would allow the County to acquire portable generators and a portable stormwater pump station to assist in removing stormwater from these areas. The County would also install permanent outfall pipes to the Atlantic Ocean; acquire easements on private property to locate the portable pump when needed. The County would also acquire a Coastal Area Management Act (CAMA) major permit to install the outfalls. These outfalls would be capped on both ends during normal conditions and used only in an emergency when the State permits pumping to the ocean."</i>



Table 21 - Potential Projects (Part 3 of 3)

Project Name	Project Description
Waterlily Road Improvements Study	This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 3. Additionally, the project area was identified as a hot spot in the citizen survey. <i>"This project would provide funding for a study to evaluate alternatives for elevating Waterlily Road to reduce risk of being inundated during flood events, in coordination with NCDOT."</i>
Bells Island Road Improvements Study	This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. <i>"This project would provide funding for a study to evaluate alternatives for elevating Bells Island Road to reduce risk of being inundated during flood events, in coordination with NCDOT."</i>
Knotts Island Marsh Causeway Improvements Study	This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. <i>"This project would provide funding for a study to evaluate alternatives for elevating Marsh Causeway to reduce risk of being inundated during flood events, in coordination with NCDOT."</i>
Tulls Creek Road Area Improvements Study	This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. <i>"This project would provide funding for a study to evaluate roadway and drainage improvements on Tulls Creek Road, Old Tulls Creek Road, and Rocky Top Road to reduce risk of roads being inundated for extended periods, in coordination with NCDOT."</i>

In addition to potential new projects, a list of currently in-progress or recent projects is listed below.

Table 22 - In-Progress Projects (Part 1 of 2)

Project Name	Project Description
Shoreline Stability Study/Beach Nourishment - Pine Island, Corolla & Carova	A shoreline stability study is currently in progress to determine vulnerability and shoreline change trends and recommendations as to further action for beach nourishment. However, the citizen survey indicated a desire for beach nourishment for the Currituck beaches.
Property Buyout	Property buyouts of repetitive loss properties. Properties bought out through the FEMA buy-out program can be used for limited purposes and would primarily serve as land returned to an open space condition and associated increased infiltration and natural floodplain function.
Groundwater lowering systems	This project is identified in the Outer Banks Hazard Mitigation Plan action #CUR6 <i>"Enhance existing and/or implement new groundwater lowering systems in low-lying coastal areas."</i> <i>"Lowering system in place at Whalehead subdivision with ongoing enhancements in place. Future system being pursued for Ocean Sands/Crown Point subdivision. New projects have been identified and expansion of existing systems are also planned."</i>



Table 23 - In-Progress Projects (Part 2 of 2)

Project Name	Project Description
Dune Restoration	Support for projects to plant and stabilize dunes. This was included as a project in the Outer Banks Hazard Mitigation Plan as action #CUR10. <i>"Evaluate allocating a portion of occupancy tax toward the dune protection program and shoreline restoration, and expand extent of the dune protection program to include grant support of sand fencing."</i> This was also included in the Currituck County Resilient Redevelopment Plan as Environmental Action 3. <i>"Dune Enhancement: Dunes serve as natural mitigation and protection from storms. This project would provide funding for dune plantings, sand fencing, importing sand, and other appropriate measures to repair and enhance frontal dunes."</i>
Coinjock Water Main	This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 1. <i>"The mainland water system runs primarily north and south. The southern part of the County's mainland is separated by the USACE Intracoastal Waterway (Coinjock Canal). In 2006, a new 12-inch water main was horizontally directional drilled (HDD) under the canal after the previous water main failed. The only water treatment plant is located in the center portion of the county north of the Coinjock Canal. There are two elevated water towers located south of the Coinjock Canal. Should the water main under the Coinjock Canal break, the southern portion of the county would be out of water in approximately one day. This project would install a backup water main across the Coinjock Canal consisting of approximately 450 feet of 18-inch HDPE bored under the bed of the Coinjock Canal and approximately 150 feet of connection on each end."</i>

Projects were then prioritized through two surveys, one sent to the CAT and one to the citizens who indicated a desire to remain involved and receive updates in the initial citizen survey. The survey listed each project idea and asked respondents to rank them as Lowest Priority, Low Priority, Neither Low Priority nor High Priority, High Priority, or Highest Priority, which was then assigned a numeric value of 1-5 respectively. See Appendix C for the full surveys and results. The projects were then sorted by average score and ranked. To assign priority to the CAT survey and second citizen survey results, the top four projects were ranked high priority, the bottom four were ranked low priority, and the remainder were ranked medium priority. Consideration of the CAT priority, Citizen priority, and additional factors such as cost, effort required, and alignment with program goals was made and an overall priority was assigned to each project.

Table 24 - Project Prioritization (Part 1 of 2)

Project Name	CAT Average	CAT Ranking	CAT Priority	Citizen Average	Citizen Ranking	Citizen Priority	Final Priority
Storm Drainage Maintenance (Ditch Maintenance)	4.4	1	High	4.08	1	High	High
Guinea Mill Run Drainage Improvements - Culvert and Channel Modifications	4.2	2	High	3.29	6	Medium	High



Table 25 - Project Prioritization (Part 2 of 2)

Project Name	CAT Average	CAT Ranking	CAT Priority	Citizen Average	Citizen Ranking	Citizen Priority	Final Priority
Moyock Area Drainage Study	4.2	2	High	3.22	9	Medium	High
Tulls Creek Road Area Improvements Study	4	4	High	3.27	8	Medium	High
Public Education and Outreach Program	3.8	5	Medium	3.39	4	High	Medium
Stormwater Pump Stations	3.6	6	Medium	3.31	5	Medium	Medium
Outer Banks Outfalls	3.2	10	Medium	3.69	2	High	Medium
Sewer Feasibility Study	2.8	14	Low	3.46	3	High	Medium
Marsh Sill and Shoreline Restoration - Coinjock Bay	3.2	10	Medium	3.28	7	Medium	Medium
Bells Island Road Shoreline Protection	3.4	8	Medium	3.2	10	Medium	Medium
Bells Island Road Improvements Study	3.4	6	Medium	3.04	13	Low	Medium
Knotts Island Marsh Causeway Improvements Study	3	12	Low	3.2	10	Medium	Medium
Waterlily Road Improvements Study	3.4	8	Medium	2.98	14	Low	Medium
Marsh Sills - Tulls Creek Rd	3	12	Low	3.16	12	Low	Low
Elevate Structures	2	15	Low	2.94	15	Low	Low

Project Portfolio

From the initial project list, 13 projects have been further developed for inclusion in the project portfolio. All the projects selected were given a priority ranking of either high or medium. However, that does not preclude further development of any of the remaining projects initially ranked low priority.



Table 26 - Portfolio Project #1

Project Name	Storm Drainage Maintenance (Ditch Maintenance)
Project Description	Work with private landowners and NCDOT to ensure maintenance of drainage ditches throughout the county and maximize the capability of existing drainage systems and minimize flooding from rainfall and poor drainage. The county has made a significant effort but does not have a permanent funding source. This was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 4 and was identified as a common concern in the citizen survey. The county has existing mapping of the major drainage ways throughout the county and institutional knowledge of problem areas. This project would provide funding to establish a program and plan to work with NCDOT to implement a maintenance program to target priority roadside ditches and structures, including the hot spots identified in the citizen surveys. In the project prioritization process, this project was selected as the top priority by both the CAT and citizens.
Hazard(s) Addressed by Project	Flooding
Type of Solution	Infrastructure
Project Estimated Cost	\$101K - \$250K
Potential Implementation Funding Sources	General Fund, Grant Funds, Tax or tax incentive program
Projected Estimated Timeline	1 year to establish, then ongoing
Priority Rating	High
Project Map	N/A



Table 27 - Portfolio Project #2

Project Name	Guinea Mill Run Drainage Improvements - Culvert and Channel Modifications
Project Description	Full design, permitting, and implementation of upsized culverts and channels in Guinea Mill Run. This project works to improve drainage in the Guinea Mill Run watershed outside of Moyock. This area was identified as a hot spot in the first citizen survey and has been a known problem area. In 2018, a Guinea Mill Run Hydrology and Hydraulics study was completed by the US Army Corps of Engineers through the Planning Assistance to States program That study recommended "Improvement Plan 3." This plan included clearing and snagging of all the canals, modification of culvert structures and channel modification of Guinea Mill Run Canal.
Hazard(s) Addressed by Project	Flooding
Type of Solution	Infrastructure
Project Estimated Cost	\$1,000,000 - \$4,000,000
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	2-5 years (1 year design and 1-4 years implementing improvements)
Priority Rating	High
Project Map	



Table 28 - Portfolio Project #3

Project Name	Moyock Area Drainage Study
Project Description	Drainage study and improvements of the Moyock township. This project was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 1. Additionally, the general area and several of the specific drainages were identified as hot spots in the citizen survey. NC 168 runs through Moyock and in many locations limits drainage from the areas of Moyock west of NC 168. Drainages to be included in this study include: Eagle Creek, Western Canal, and Roland Creek Canals; Moyock Service District ditches #1-6; Ranchland drainage; Baxter Lane Ditch; Newtown Area Ditches; Survey Road ditch to Roland Creek; Summit Farms culvert and ditches; and NC 168 culverts.
Hazard(s) Addressed by Project	Flooding
Type of Solution	Infrastructure
Project Estimated Cost	\$251K - \$500K
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	2-5 years (1 year drainage study and 1-4 years implementing recommended improvement)
Priority Rating	High
Project Map	



Table 29 - Portfolio Project #4

Project Name	Tulls Creek Road Area Improvements Study
Project Description	Drainage/road improvement study and implementation of recommended improvements for the Old Tulls Creek Rd, Tulls Creek Rd, and Rocky Top Rd area. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. The study would evaluate different options of drainage improvements and elevating the roadway to reduce the risk of roads being inundated for extended periods. For optimal project success this study should be done in coordination with NCDOT.
Hazard(s) Addressed by Project	Flooding
Type of Solution	Infrastructure
Project Estimated Cost	\$51K - \$100K
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	2-5 years (1 year study and 1-4 years implementing recommended improvement)
Priority Rating	High
Project Map	



Table 30 - Portfolio Project #5

Project Name	Public Education and Outreach Program
Project Description	A targeted education and outreach program regarding the benefit of natural areas and flood risk, preparedness, insurance and mitigation. In the Outer Banks Hazard Mitigation Plan actions #CUR34 and CUR#35 were to send targeted outreach to repetitive loss property owners and pre-FIRM property owners, respectively. OBXHMP action #CUR31 was to educate property owners on the natural and beneficial functions of floodplains, watersheds, and other natural/coastal areas. FIRM education and Outreach was also identified as Housing Action 3 in the Currituck County Resilient Redevelopment Plan. High levels of public awareness and resulting preparedness for disaster events improves resiliency by either mitigating the potential effects of a storm event or improving the recovery as a result of advance preparations and measures such as flood insurance.
Hazard(s) Addressed by Project	Flooding, Sea Level Rise
Type of Solution	Public Education
Project Estimated Cost	N/A
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	1 year to establish, then ongoing
Priority Rating	Medium
Project Map	N/A



Table 31 - Portfolio Project #6

Project Name	Stormwater Pump Stations
Project Description	The design and installation of three stormwater pump stations to reduce flooding from stormwater in canals at Ranchland Drive and Green View Road/Eagle Creek subdivision This project was identified in the Currituck County Resilient Redevelopment Plan as Housing Action 2. Canals in northern Currituck County drain to a single crossing of NC 168, which leads to flooding in residential areas along canals during storm events. The installation of the three pump stations would serve to alleviate the strain on this crossing and reduce flooding in several Moyock area hot spots identified in the citizen survey.
Hazard(s) Addressed by Project	Flooding
Type of Solution	Infrastructure
Project Estimated Cost	\$501K - \$1M
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	2 years
Priority Rating	Medium
Project Map	



Table 32 - Portfolio Project #7

Project Name	Outer Banks Outfalls
Project Description	Installation of stormwater outfalls for large storm events along the Currituck Outer Banks. This project was identified in the Currituck County Resilient Redevelopment Plan as Economic Development Action 1. Following significant storms, such as hurricanes and tropical storms, many residential areas on the Currituck Outer Banks remain flooded for several days because water has nowhere to run off to and the soil cannot infiltrate further. This project would include design and then acquiring portable generators, a portable stormwater pump station to assist in removing stormwater from these areas, and installation of permanent outfall pipes to the Atlantic Ocean. These outfalls would be capped on both ends during normal conditions and used only in an emergency when the State permits pumping to the ocean. The County would also require a Coastal Area Management Act (CAMA) major permit to install the outfalls and easements on private property for the pumps. Outer Banks residential areas were identified as hot spots in the citizen survey and flooding and the resulting limited access to the area has a detrimental impact on the County's as this area is primarily rental properties and vacation homes.
Hazard(s) Addressed by Project	Flooding, Sea Level Rise, Hurricane and Tropical Storm
Type of Solution	Infrastructure
Project Estimated Cost	\$251K - \$500K
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	2-5 years
Priority Rating	Medium
Project Map	N/A



Table 33 - Portfolio Project #8

Project Name	Sewer Feasibility Study
Project Description	A long-term feasibility study of possible solutions, potential cost, and funding options for future sewer and septic system replacement and repair throughout the county. Concern over pollution from failing sewer systems (specifically Eagle Creek, Waterfront Drive), was an issue raised in the citizen survey. Although some fixes are underway, rising groundwater and increased flooding events will likely increase the frequency of sewer system failures in the future.
Hazard(s) Addressed by Project	Rising Groundwater, Flooding
Type of Solution	Planning Study
Project Estimated Cost	
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	1 year
Priority Rating	medium
Project Map	N/A



Table 34 - Portfolio Project #9

Project Name	Marsh Sill and Shoreline Restoration - Coinjock Bay
Project Description	Shoreline restoration uses techniques such as installation of marsh sills, plantings, and oyster bags or rock to stabilize the shoreline. This project includes design and installation of approximately 770 LF of shoreline restoration at 3581 Caratoke Hwy. A marsh sill and shoreline restoration at this location serves to protect the roadway and has the potential to be developed as a public water access. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds. Additionally, shoreline stabilization and marsh restoration are identified as Outer Banks Hazard Mitigation Plan actions #CUR11 and #CUR12; to pursue shoreline stabilization projects and regular shoreline monitoring and prioritization of marsh restoration planning and design for storm surge mitigation benefits.
Hazard(s) Addressed by Project	Flooding, Shoreline erosion, Sound Water Quality
Type of Solution	Nature Based
Project Estimated Cost	\$50,000 - \$100,000
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	1 year
Priority Rating	medium
Project Map	



Table 35 - Portfolio Project #10

Project Name	Bells Island Road Shoreline Protection
Project Description	Living shorelines use plantings and other natural elements such as oyster bags or rock to stabilize the shoreline. This project proposes to design and install living shorelines along a 4,500 LF stretch of Bells Island Rd. A living shoreline at this location serves to protect the roadway which was identified as a hot spot in the citizen survey. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds. Additionally, shoreline stabilization and marsh restoration are identified as Outer banks Hazard Mitigation Plan actions #CUR11 and #CUR12; to pursue shoreline stabilization projects and regular shoreline monitoring and prioritization of marsh restoration planning and design for storm surge mitigation benefits.
Hazard(s) Addressed by Project	Flooding, Shoreline erosion, Sound Water Quality
Type of Solution	Nature Based
Project Estimated Cost	
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	1 year
Priority Rating	medium
Project Map	



Table 36 - Portfolio Project #11

Project Name	Bells Island Road Improvements Study
Project Description	Drainage/road improvement study and implementation of recommended improvements for Bells Island Rd. This project would funding for a study to evaluate alternatives for elevating Bells Island Road to reduce risk of being inundated during flood events. Bells Island Rd is the only land access to the Bells Island area, so inundation of the roadway can cut off access or create unsafe driving conditions for individuals who attempt to drive the road anyway. This could be done in conjunction with, or in place of, the Bells Island Road Shoreline Protection project. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. For optimal project success this study should be done in coordination with NCDOT.
Hazard(s) Addressed by Project	Flooding, Shoreline erosion
Type of Solution	Infrastructure
Project Estimated Cost	\$51K - \$100K
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	2-5 years (1 year study and 1-4 years implementing recommended improvement)
Priority Rating	Medium
Project Map	



Table 37 - Portfolio Project #12

Project Name	Knotts Island Marsh Causeway Improvements Study
Project Description	Drainage/road improvement study and implementation of recommended improvements for the Knotts Island Marsh Causeway. This project would provide funding for a study to evaluate alternatives for elevating Marsh Causeway to reduce risk of being inundated during flood events. The Knotts Island Marsh Causeway is the only land access to Knotts Island, so inundation of the roadway can severely limit access, requiring use of the ferry or create unsafe driving conditions for individuals who attempt to drive the road anyway. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4. Additionally, the project area was identified as a hot spot in the citizen survey. For optimal project success this project should be completed in coordination with NCDOT.
Hazard(s) Addressed by Project	Flooding, Shoreline erosion
Type of Solution	Infrastructure and/or Nature Based
Project Estimated Cost	\$101K - \$250K
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	2-5 years (1 year study and 1-4 years implementing recommended improvement)
Priority Rating	Medium
Project Map	



Table 38 - Portfolio Project #13

Project Name	Waterlily Road Improvements Study
Project Description	<p>Drainage/road improvement study and implementation of recommended improvements for the Waterlily Road. This project would provide funding for a study to evaluate alternatives for elevating Waterlily Road to reduce risk of being inundated during flood events. Waterlily Rd is the only land access to the Piney Island and Church Island Area, so inundation of the roadway can cut off access or create unsafe driving conditions for individuals who attempt to drive the road anyway. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 3. Additionally, the project area was identified as a hot spot in the citizen survey. For optimal project success this project should be completed in coordination with NCDOT.</p>
Hazard(s) Addressed by Project	Flooding, Shoreline erosion
Type of Solution	Infrastructure and/or Nature Based
Project Estimated Cost	\$51K - \$100K
Potential Implementation Funding Sources	General Fund, Grant Funds
Projected Estimated Timeline	2-5 years (1 year study and 1-4 years implementing recommended improvement)
Priority Rating	Medium
Project Map	



References

- ArcGIS web application. (n.d.). Retrieved March 21, 2022, from <https://www.arcgis.com/apps/webappviewer/index.html?id=f5e463a929ed430095e0a17ff803e156>
- Audubon North Carolina. 2021, Currituck Sound Coalition Marsh Conservation Plan. November 2021.
- Biarrrieta, N. G. 2020, SAVE Currituck Sound: Submerged Aquatic Vegetation Evaluation in Currituck Sound, NC. May 2020.
- Centers for Disease Control and Prevention. (2021, August 27). CDC/ATSDR SVI data and documentation download. Centers for Disease Control and Prevention. Retrieved January 21, 2022, from https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html
- Centers for Disease Control and Prevention. (2022, March 15). CDC/ATSDR social vulnerability index (SVI). Centers for Disease Control and Prevention. Retrieved March 21, 2022, from <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>
- Coastal Protection Engineering of North Carolina, INC. 2020, 2020 Beach Monitoring and Beach Stability Assessment Currituck County, North Carolina. Prepared for Currituck County. November 2020.
- Currituck County. 2017, Hurricane Matthew Resilient Redevelopment Plan. May 2017.
- Currituck County. 2020, Baxter Lane Stormwater Report. March 2020.
- Currituck County. 2021, Currituck County Watershed Protection Plan Soil and Water Conservation. 2021.
- Dewberry. 2018, Currituck County-Coastal Resilience Rainfall Flood Study. August 2018.
- Dixon S. W., Emory E. 2017, Currituck County Agricultural Development Plan. December 2017.
- Ecosystem Enhancement Program. 2009, Pasquotank River Basin Restoration Priorities. September 2009.
- Halstead, Amber. 2018, Currituck County Flood Risk Perception Study. April 2018.
- Lloyd, Dylan. 2020, Draft Narrative Water Quality Monitoring and Remediation Currituck Sound Watersheds. July 2020.
- National storm surge hazard maps - version 2. (n.d.). Retrieved March 21, 2022, from <https://www.nhc.noaa.gov/nationalsurge/>
- National Wetlands Inventory. (n.d.). Retrieved March 21, 2022, from <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>
- NCDCM. 2019, North Carolina 2019 Oceanfront Setback Factors & Long-Term Average Annual Erosion Rate Update Study. January 2019.
- Sea level rise data download. (n.d.). Retrieved March 21, 2022, from <https://coast.noaa.gov/slrdata/>
- USACE. 2018, Guinea Mill Run Planning Assistance to States Hydrology and Hydraulics Study. Prepared for Currituck County. October 2018.
- Wood. 2020, Outer Banks Regional Hazard Mitigation Plan. Prepared for Currituck County. June 2020.



Appendix A: CAT Meeting Agendas & Attendance List

- ◆ CAT Meeting #1 Agenda 2021-12-03
- ◆ CAT Meeting #2 Agenda 2022-02-22
- ◆ CAT Meeting Attendance List

North Carolina Resilient Coastal Communities Program Currituck County

Community Action Team

Meeting 1 – December 3, 2021

1. Introductions

- Contact List

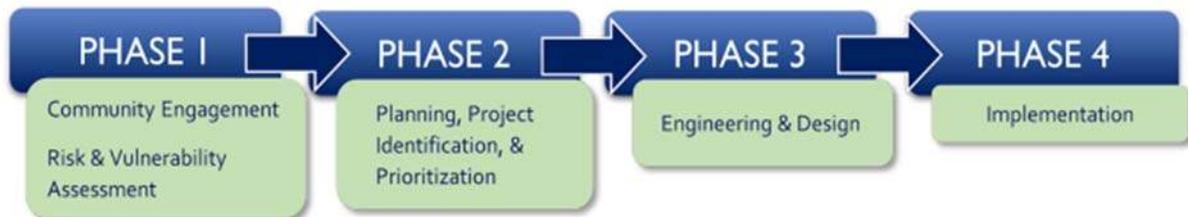
<https://docs.google.com/spreadsheets/d/1AWDcjW3nWT1oaykX6YMh8fttFZhTweshdiotXf7NsOQ/e/dit#gid=0>

- Project Google Folder

<https://drive.google.com/drive/folders/1R8xFqChpHCRMZYJZ-ivyN4IN9QkC7J2v?ths=true>

2. RCCP Program Overview

- Administration
- Phases



- Goals & Objectives
 - i. Perform Data and Community driven risk and vulnerability assessment
 - ii. Develop a portfolio of planned and prioritized solutions
- Map critical assets, infrastructure, and natural resources
- Funding Opportunities. Proposed coastal investments in Congress:
 - i. \$207 million for grants to States and Territories to implement coastal and Great Lakes habitat restoration projects which will provide ecosystem and community resilience benefits.
 - ii. \$160 million to address working waterfront infrastructure.
 - iii. \$845 million for National Estuaries Programs and other EPA Geographic programs to help coastal communities protect and restore habitat and make on-the-ground improvements for clean and safe water.

- iv. \$1 billion for FEMA Pre-disaster Hazard Mitigation Assistance to help communities—both coastal and non-coastal—adapt to changing conditions and reduce their vulnerabilities so they can withstand and rapidly recover from hazards.
- v. \$500 million for the FEMA Hazard Mitigation Revolving Loan Fund to help communities to mitigate the impacts of future hazard events.
- vi. \$492 million for competitive grants for coastal natural infrastructure projects under the National Oceans and Coastal Security Fund to benefit fish and wildlife and to reduce the impacts of coastal flooding.
- vii. \$491 million for competitive grants for Community-Based Habitat Restoration projects that restore marine, estuarine, coastal, and Great Lakes or protect or construct features that protect coastal communities from flooding or coastal storms.
- viii. \$465 million for USACE projects for streambank and shoreline protection, sediment management, small flood control project, and other purposes.
- ix. \$9.5 billion to NOAA to provide funding and technical assistance for the purposes of restoring a marine, estuarine, coastal, or Great Lake habitat; or providing adaptation to climate change, including by protecting, restoring, or establishing ecological features that protect coastal communities from sea-level rise, coastal storms, or flooding; or designing or implementing blue carbon projects.
- x. \$500M to address coastal flooding and sea-level rise.
- xi. \$50M for insular coastal hazards.
- xii. **Total = \$14.2 Billion**

3. Vision & Goals

- The County of Currituck has a vision of creating an open forum and exchange, from experts and laypeople alike, toward the discussion of issues and discovery of solutions as they relate to an ongoing mission of addressing and solving climate resiliency barriers in the interest of creating a dynamic and robust strategy of providing a process to identify and complete shovel-ready projects. To achieve this vision, this plan aims to meet the following goals:
 - i. Protecting at-risk populations from flood and wind damage
 - ii. Defending critical assets and infrastructure from potential loss
 - iii. Conserving land and water resources for a sustainable future
 - iv. Incorporating best-practices into local government code and policy
 - v. Continuation of community engagement and awareness on resiliency

4. Vulnerability Assessment, Project Identification & Prioritization

- Identification of vulnerable populations, infrastructure, assets, and natural resources
- Repetitive loss areas
- Types of projects
 - i. Physical projects i.e. roads, pipes, ditches, pump stations
 - ii. Nature based project i.e. living shoreline, enhanced revetments, marsh restoration, floodplain reclamation (Required at least 1)
 - iii. Outreach and education
 - iv. Policy based
 1. Building Code revision
 2. Ditch maintenance plans
 - v. Disaster aid and planning

5. Community Engagement Strategy

- Step 1 – Surveys for general goals and objectives
 - i. Geotargeted ads
 - ii. Library and public works fliers
 - iii. Other facilities
- Step 2 - Follow-up survey for citizen ranking and prioritization of projects

6. Next-Steps

- Identify risks and vulnerable locations.
- Upload any studies, reports, or information documenting flood risk to Google Drive project folder.
- Public questionnaire
- CAT Meeting #2
 - i. Beginning of January
 - ii. Doodle Poll

North Carolina Resilient Coastal Communities Program Currituck County

Community Action Team

Meeting 2 – February 22, 2022

1. Survey Results

- Overall Statistics
 - i. 737 of 921 – 80% permanent residents of Currituck County
 - ii. 152 of 921 – Nonresident property owner in Currituck County
- Key Findings
 - i. Most residents know if their property is in a floodplain or not
 - ii. Most significant threats
 - 1. Flooding due to Heavy Rain
 - 2. Tropical Weather Systems
 - 3. Drainage Issues
 - iii. Ability of Currituck County to withstand and recover from minor storms and limited flooding
 - 1. ~76% able or completely able
 - 2. ~14% unable or somewhat unable
 - iv. Ability of Currituck County to withstand and recover from major storms and extensive flooding
 - 1. ~48% able or completely able
 - 2. ~39% unable or somewhat unable
 - v. Demographic Summary
 - 1. ~84% older adults
 - 2. ~10% low-income individuals
 - 3. ~13% People with disabilities
 - 4. ~5% People of racial or ethnic minorities
 - vi. Environmental Issues affect disproportionate sectors of the community
 - 1. Largely Yes to Low-income individuals, Older adults, and people with disabilities
 - 2. No to People of racial or ethnic minorities
 - vii. Which areas are most affected by environmental issues? Open-ended

1. 459 Individual responses
2. Compiled summary of responses
 - a. Ocean Sands (69)
 - b. Carova (28)
 - c. Tulls Creek Rd (27)
 - d. Corolla (21)
 - e. Moyock (17)
 - f. Poyners Rd (16)
 - g. 4x4 Area (15)
 - h. Eagle Creek (15)

viii. Effectiveness of Flood Protection Measures

ix. Additional Concerns

1. 144 individual responses
2. Common concerns
 - a. Bridge to Corolla/Mid-Currituck Bridge
 - b. Eagle Creek Sewage System
 - c. Waterfront Dr – Raw sewage runoff to sound
 - d. Algae Bloom at water treatment plant on Mila Drive, Septic?
 - e. Drainage Canals
 - f. Older neighborhoods flood due to new neighborhoods

x. E-mail Follow-ups

1. 165 individuals

2. Project Portfolio

- Go through current list
- Anything we miss?
- Follow-up survey through survey monkey for individual CAT member responses.th

CAT Meeting #1 Attendance

Individual	Organization
Steve Marks	WithersRavenel
Katherine Knight	WithersRavenel
Caroline Richardson	WithersRavenel
Dylan Lloyd	Currituck County
Laurie LoCicero	Currituck County - Planning
Lora Eddy	The Nature Conservancy
Mackenzie Todd	NC Division of Coastal Management
Steven Pyle	Currituck County
Wendy Shannon	Moyock Stormwater District
David Shepherd	Eagle Creek HOA

CAT Meeting #2 Attendance

Individual	Organization
Steve Marks	WithersRavenel
Katherine Knight	WithersRavenel
Dylan Lloyd	Currituck County
Mary "Kitty" Ethridge	Currituck County Commissioner
David Shepherd	Eagle Creek HOA
Laurie LoCicero	Currituck County - Planning



Appendix B: OBX Hazard Mitigation Plan

Annex A Currituck County Unincorporated Areas

A.1 PLANNING PROCESS

The table below lists the HMPC members who represented Currituck County unincorporated areas.

Table A.1 – HMPC Members

Representative	Agency/Department	Position or Title
Jason Litteral, CFM	Planning and Community Development	Planner II
Jennie Turner, CFM, CZO	Planning and Community Development	Planner II
Mary Newns	Emergency Management Department	Emergency Management/Communications Director
Rebecca Gay	Emergency Management Department	Deputy Emergency Management Coordinator
Randall Edwards	Public Information Department	Information and Communications Officer
Lora Eddie	Stakeholder	Coastal Engagement Coordinator, The Nature Conservancy
Warren Eadus	Stakeholder	President, Quible and Associates, P.C.
Anthony Dickinson	Stakeholder	Agent, Farm Bureau Insurance Group
Jason Summerton	Stakeholder	Broker-in-Charge, Twiddy & Company, 4WD area

A.2 COMMUNITY PROFILE

Geography

Currituck County is located in the northeastern corner of the Coastal Plain of North Carolina. Its land area encompasses the mainland and barrier islands. The County comprises a total land area of 261.91 square miles.

According to data from the U.S. Fish and Wildlife Service’s National Wetlands Inventory, there are approximately 3,424 acres of wetlands in Currituck County, primarily forested/shrub wetlands.

Figure A.1 shows a base map of Currituck County.

Figure A.1 – Location Map, Currituck County



Source: U.S. Census Bureau

ANNEX A: CURRITUCK COUNTY UNINCORPORATED AREAS

Population and Demographics

Table A.2 provides population counts and growth estimates for Currituck County as compared to the Region overall. Table A.3 provides demographic information for the County as compared to the Region.

Table A.2 – Population Counts, Currituck County, 2010-2017

Jurisdiction	2000 Census Population	2010 Census Population	2017 ACS Population Estimate	Total Change 2010-2017	% Change 2010-2017
Region Total	48,157	57,467	60,659	3,192	5.55%
Currituck County	18,190	23,547	25,247	1,700	7.22%

Source: US Census Bureau Decennial Census 2000, Decennial Census 2010; American Community Survey 2013-2017 5-Year Estimates

Table A.3 – Racial Demographics, Currituck County, 2017

Jurisdiction	White, %	Black, %	Asian, %	Other Race, %	Two or More Races, %	Persons of Hispanic or Latino Origin*, %
Region Total	91.0	3.5	0.5	2.2	2.7	5.7
Currituck County	90.2	5.4	0.4	1.2	2.7	3.6

Source: US Census Bureau, American Community Survey 2013-2017 5-Year Estimates

*Persons of Hispanic origin may be of any race, so also are included in applicable race categories

Asset Inventory

The following tables summarize the Critical Infrastructure and Key Resources (CIKR) and high potential loss facilities identified in IRISK for Currituck County. Critical facilities, which include a subset of identified assets from the CIKR dataset as well as facilities identified by the HMPC, are shown in Figure A.2 on the following page and summarized in Table A.6. The County provided information is not included in IRISK vulnerability assessments. Note that the IRISK counts are by building; where a critical facility identified by IRISK comprises a cluster of buildings, each building is counted and displayed.

Table A.4 – Critical Infrastructure & Key Resources by Type

Jurisdiction	Food and Agriculture	Banking and Finance	Chemical & Hazardous	Commercial	Communications	Critical Manufacturing	EM	Healthcare	Government Facilities	Nuclear Reactors, Materials and Waste	Postal and Shipping	Transportation Systems	Energy	Emergency Services	Water	Total
Currituck County	431	20	1	758	3	144	0	29	117	1	0	161	4	16	19	1,704

Source: NCEM Risk Management Tool

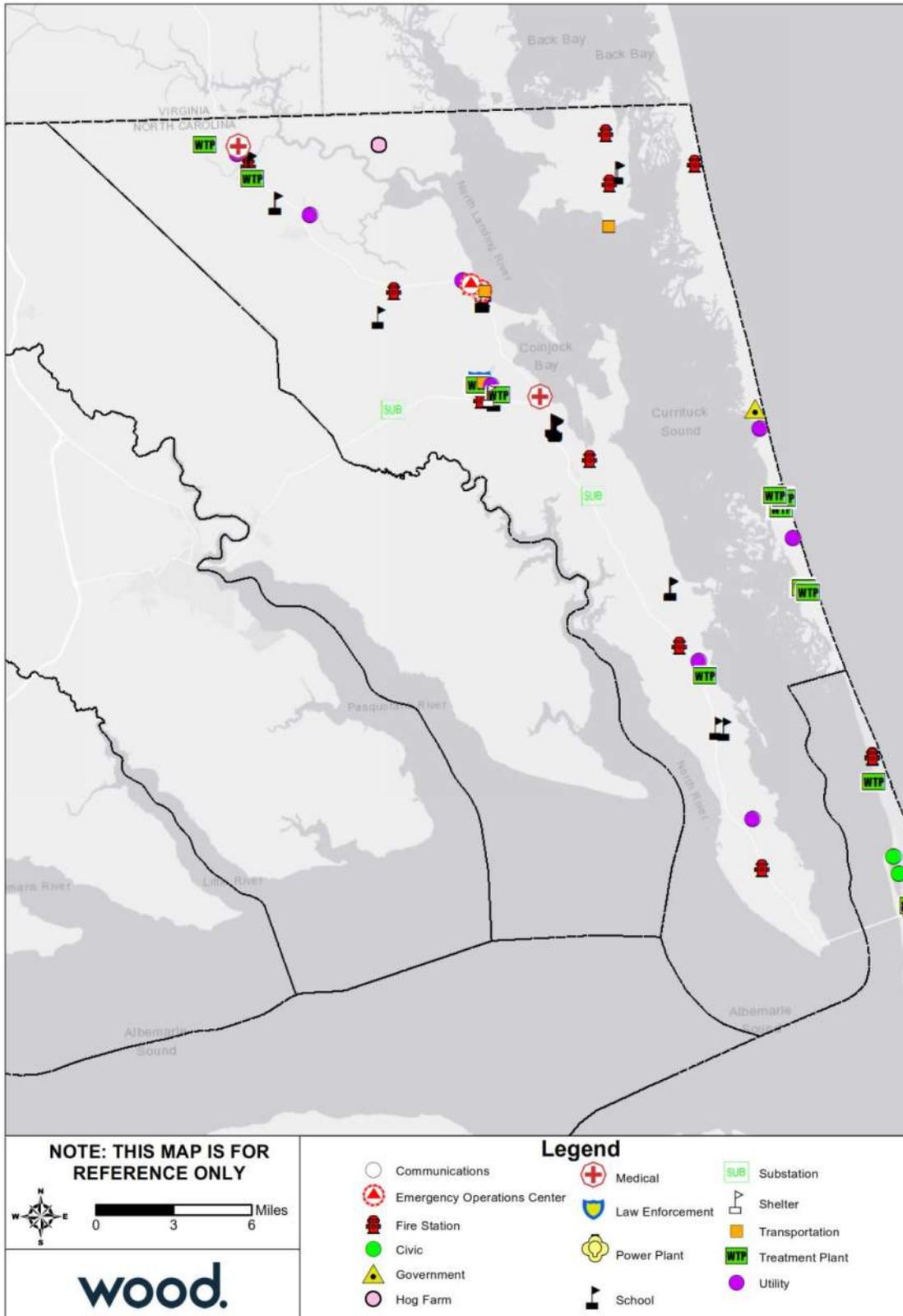
Table A.5 – High Potential Loss Facilities by Use

Jurisdiction	Residential	Commercial	Industrial	Government	Agricultural	Religious	Utilities	Total
Currituck County	11	21	0	16	1	5	5	59

Source: NCEM Risk Management Tool

Outer Banks

Figure A.2 – Critical Facilities, Unincorporated Currituck County



Source: NCEM IRISK Database, HMPC input, GIS Analysis

Table A.6 – Critical Facilities, Currituck County

Facility Type	Count
Emergency Operations Center	2
Fire Station	13
Government	2
Hog Farm	1
Medical	2
Police Station	5
School	60
Shelter	1
Substation	2
Transportation	3
Treatment Plant	26
Utility	9
Total	126

Source: NCEM IRISK Database, HMPC input, GIS Analysis

To supplement the asset inventory and provide a clearer picture of the current asset exposure in Unincorporated Currituck County, current parcel data was evaluated to identify recent development not included in NCEM’s IRISK database. Based on this analysis, Currituck County has significantly greater asset exposure that what is reflected in IRISK, with a building value increase of over 22 percent.

Table A.7 – Recent Development Not Included in IRISK

Recent Improved Parcels		IRISK Buildings		Percent Change	
Count	Value	Count	Value	Building Count	Building Value
3,399	\$664,833,300	17,069	\$2,979,468,915	19.9%	22.3%

Source: County parcel data, retrieved November 2019; IRISK database building footprints

Note: This information is not incorporated into the risk assessment, which was prepared using IRISK. However, this summary of recent development provides some context to understand the degree to which the IRISK exposure and vulnerability numbers differ from current conditions.

There are 13 listings on the National Register of Historic Places for Currituck County, including one historic district. These sites are listed in the table below.

Table A.8 – Historic Properties

Ref#	Property Name	Status Date	Category	City
09001104	Jarvisburg Colored School	12/11/2009	Building	Jarvisburg
12001156	Coinjock Colored School	1/9/2013	Building	Coinjock
15000238	Flyway Club	5/12/2015	Building	Knotts Island
72000959	Twin Houses	4/13/1972	Building	Shawboro
73001333	Currituck Beach Lighthouse	10/15/1973	Structure	Corolla
79001697	Currituck County Courthouse and Jail	5/10/1979	Building	Currituck
80002816	Currituck Shooting Club	5/28/1980	Building	Corolla
80002817	Whalehead Club	4/16/1980	Building	Corolla
80002818	Baum Site	12/8/1980	Site	Poplar Branch
80002819	Culong	2/1/1980	Building	Shawboro
80002820	Shaw House	4/17/1980	Building	Shawboro
98001210	Grandy School, (Former)	9/25/1998	Building	Grandy
99000911	Currituck Beach Lighthouse Complex (Boundary Increase)	1/12/2000	District	Corolla

Source: National Parks Service, National Register of Historic Places, October 2018

Outer Banks

ANNEX A: CURRITUCK COUNTY UNINCORPORATED AREAS

Housing

The table below details key housing statistics for Currituck County as compared to the Region overall. As a percent of 2010 housing, Currituck County's housing stock experienced more growth than the Regional average, gaining nearly 900 new units between 2010 and 2017.

Table A.9 – Housing Statistics, Currituck County, 2010-2017

Jurisdiction	Housing Units (2010)	Housing Units (2017)	Housing Units Percent Change (2010-2017)	Owner-Occupied, % (2017)	Vacant Units, % (2017)	Median Home Value (2017)
Region Total	47,945	49,616	3.5%	74.5	49.6	\$285,000
Currituck County	14,453	15,326	6.0%	82.5	36.3	\$244,500

Source: U.S. Census Bureau 2010 Decennial Census, American Community Survey 2013-2017 5-Year Estimates

Note: Owner-Occupied and vacant-unit measures are reported as a percent of the total number of housing units.

Economy

The following tables present key economic statistics for Currituck County as compared to the Region overall.

Table A.10 – Employment Statistics, Currituck County, 2017

Jurisdiction	Population in Labor Force	Percent Employed* (%)	Percent Unemployed* (%)	Percent Not in Labor Force* (%)	Unemployment Rate (%)
Region Total	32,463	61.7	3.3	34.4	5.0
Currituck County	12,960	59.9	3.0	36.0	4.8

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-Year Estimates

Note: This table reports only the civilian labor force. The labor force in armed services accounted for 0.6% of the population 16 and over across the region. Currituck County had a slightly higher population in the armed forces at 1.1%. *Population employed, population unemployed, and Population not in labor force are reported as a percent of the total population aged 16 years and older.

Table A.11 – Percent of Employed Population by Occupation, Currituck County, 2017

Occupation	Management, business, science and arts (%)	Service (%)	Sales and Office (%)	Natural Resources, Construction, and Maintenance (%)	Production, transportation, and material moving (%)
Region Total	30.6	18.7	27.8	14.0	8.9
Currituck County	30.3	17.2	27.4	16.2	9.0

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-Year Estimates

Land Use and Future Development

Currituck County land use, environment, and development regulations are the responsibility of the Planning and Zoning Division. This division is also in charge of enforcing the Unified Development Ordinance. Existing land use policies were established in the Currituck County 2006 Land Use Plan. The County's comprehensive plan is currently being updated, and the 2040 Land Use Development vision plan, Imagine Currituck, is in draft stage. Both the 2006 Land Use Plan and the draft Imagine Currituck plan were referenced for this land use and future development analysis.

Current Land Use

The County is currently divided into seven land use categories. These categories are shown below with their total acreage in Table A.12.

Table A.12 – Land Use, Currituck County

Land Use	Total Acres	Percent of County (%)
Commercial	1,539	1.0
Industrial	2,021	1.0
Institutional	10,129	6.0
Residential	14,083	9.0
Other	1,943	1.0
<i>Total Developed</i>	<i>29,715</i>	<i>18.0</i>
Agriculture	45,134	29.0
Undeveloped	83,062	53.0
Total	157,911	100

Source: Currituck County 2006 Land Use Plan

Most of the county is undeveloped (53%). Of the 18 percent that is developed, residential is the highest percentage land use. Institutional land use includes locations such as churches, hospitals, and schools. The other land use category includes golf courses, cemeteries, and parking lots, etc.

Future Development

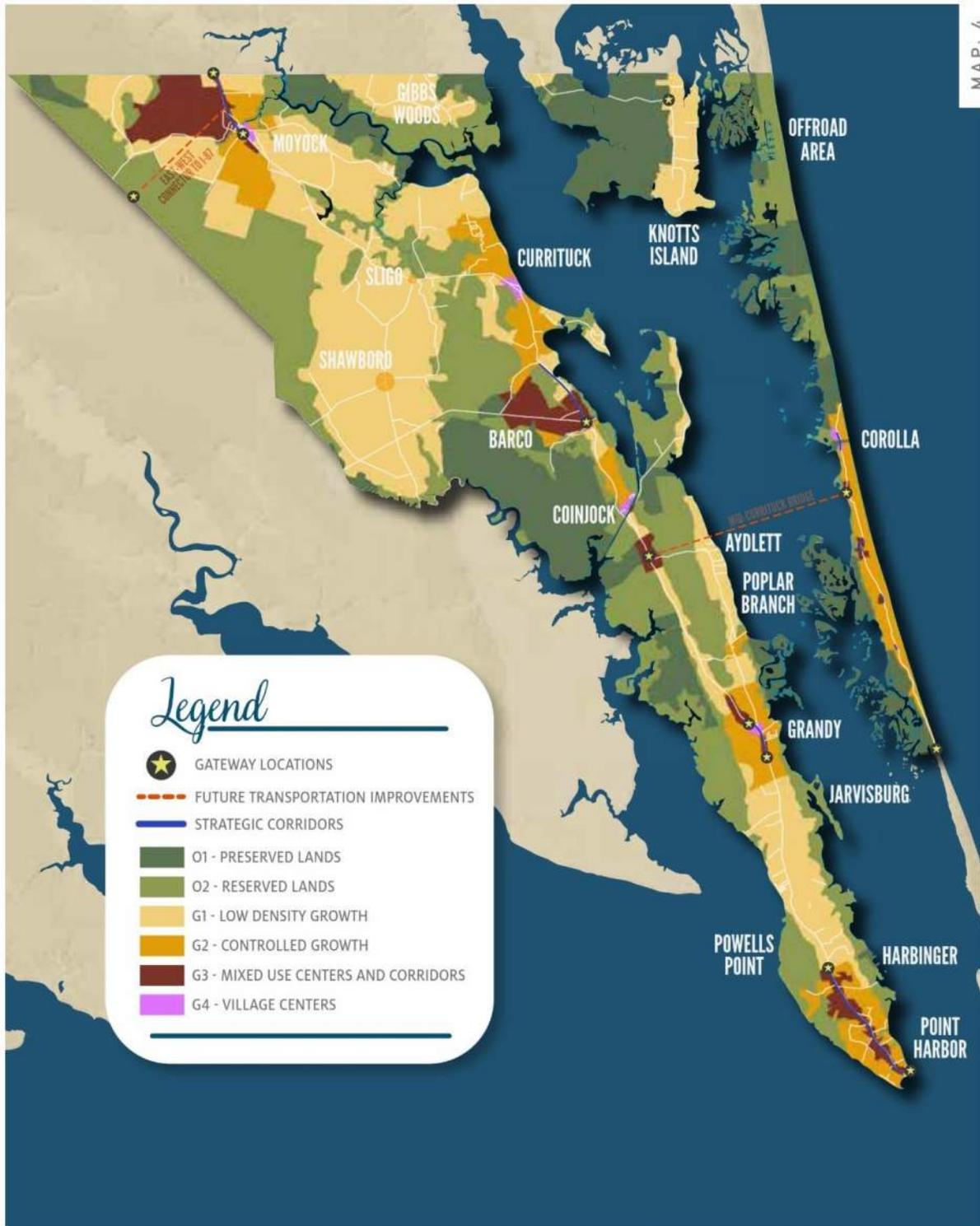
Future development and land use of the county is outlined in the Imagine Currituck draft plan. Instead of the seven Euclidean land use categories currently in effect throughout the county, the area will be split into six classifications under transect methodology. Each sector has a different balance between protected and developed land. These sectors will be

- ▶ O-1: Preserved Lands
- ▶ O-2: Reserved Lands
- ▶ G-1: Low Density Growth
- ▶ G-2: Controlled Growth
- ▶ G-3: Mixed-Use Center and Corridors
- ▶ G-4: Village Center

More information on future land use and development is available on the “Imagine Currituck” website. Figure A.3 on the following page shows the future land use of the County as envisioned in the Imagine Currituck draft plan. Changing the land classification system is the only major change between current and future land use in Currituck County.

The Imagine Currituck plan shows efforts to integrate land use and hazard mitigation planning; the land suitability analysis incorporates hazards areas, including flood areas, storm surge areas, and ocean erodible areas, into its assessment.

Figure A.3 – Currituck County Future Land Use Map from Imagine Currituck Draft Plan



Source: Imagine Currituck Draft Plan via www.imaginecurrituck.com

A.3 RISK ASSESSMENT

This section contains a hazard profile and vulnerability assessment for those hazards that were rated with a higher priority for Currituck County than for the Outer Banks Region as a whole. Risk and vulnerability findings are also presented here for those hazards that are spatially defined and have variations in risk that could be evaluated quantitatively on a jurisdictional level. The hazards included in this section are Drought, Coastal Hazards, Flood, and Wildfire.

A.3.1 Drought

Drought was rated with a greater potential impact in Currituck County than for the Region overall to the greater amount of agricultural land at risk in Currituck County. Table A.13 details crop losses due to drought in the county from 2007 through 2017. Based on this data, Currituck County averages \$56,060 annually in crop losses due to drought.

Table A.13 – Crop Losses Resulting from Drought, 2007-2017, Currituck

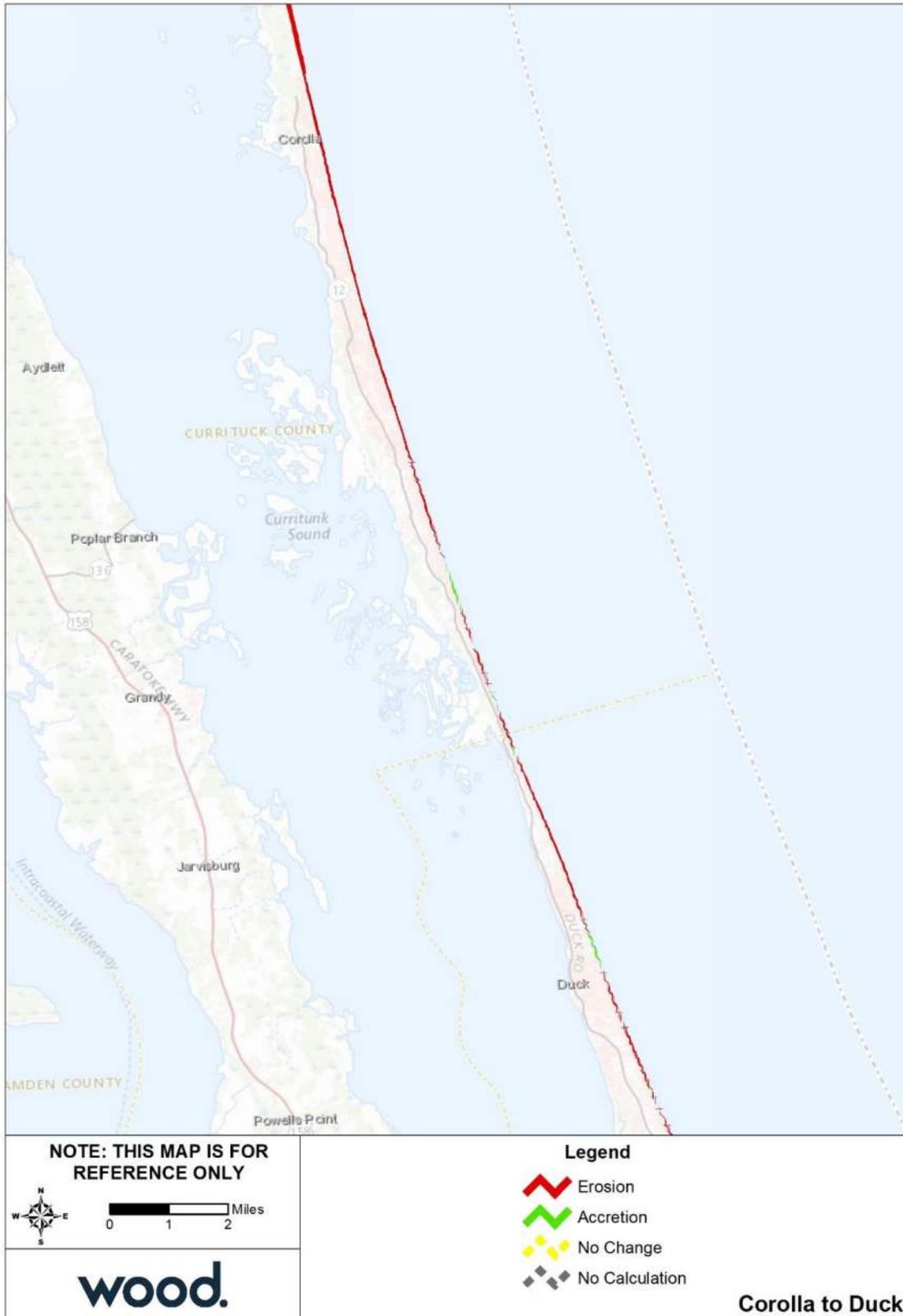
Year	Determined Acres	Indemnity Amount
2007	948.60	\$84,250.00
2008	1,590.10	\$75,505.00
2009	388.90	\$18,154.00
2010	703.08	\$33,932.00
2011	3,055.63	\$240,606.00
2013	699.40	\$55,230.00
2014	123.80	\$1,534.00
2015	947.37	\$71,537.10
2016	156.60	\$18,449.50
2017	395.70	\$17,466.00
Total	9,009.18	\$616,663.60

Source: USDA Risk Management Agency

A.3.2 Coastal Hazards

Figure A.4 on the following page shows coastal erosion rates along developed areas of the Currituck County oceanfront coastline from Corolla to the County’s southern border according to data from the DCM 2019 Long-Term Average Annual Erosion Rate Update Study. Most of the developed oceanfront coastline of Currituck County is experiencing erosion.

Figure A.4 – Erosion Rates, Currituck County



Source: North Carolina Division of Coastal Management

A.3.3 Flood

Table A.14 details the acreage of Currituck County’s total area by flood zone on the 2006 DFIRM. Per this assessment, over 69 percent of the County falls within the mapped 1%-annual-chance floodplains.

Table A.14 – 2006 Flood Zone Acreage in Currituck County

Flood Zone	Acreage	Percent of Total (%)
Zone A	4,294.32	1.5%
Zone AE	123,599.46	43.4%
Zone VE	70,531.84	24.8%
Zone X (500-year)	15,108.54	5.3%
Zone X Unshaded	51,271.99	18.0%
Open Water	19,716.44	6.9%
Total	284,522.59	

Source: FEMA 2006 DFIRM

Figure A.5 reflects the mapped flood hazard zones for Currituck County, and Figure A.6 displays the depth of flooding estimated to occur in these areas during the 1%-annual-chance flood. These maps display the flood hazard according to the 2006 DFIRM, which is used in the IRISK database for vulnerability assessment. The County received a new effective DFIRM in 2018 which resulted in significant changes to the mapped flood hazard area. The 2018 effective DFIRM is shown in Figure A.7 and summarized in Table A.15.

Table A.15 – 2018 Flood Zone Acreage in Currituck County

Flood Zone	Acreage	Percent of Total (%)
Zone A	3,335.81	1.2%
Zone AE	156,091.14	54.8%
Zone VE	7,739.28	2.7%
Zone X (500-year)	6,877.98	2.4%
Zone X Unshaded	76,815.70	27.0%
Open Water	33,744.30	11.9%
Total	284,604.21	

Source: FEMA 2006 DFIRM

To supplement the IRISK assessment of property at risk from the 1% annual chance flood event in Section 4 and provide a clearer picture of the current property at risk in the Currituck County, recent development not included in IRISK was analyzed using GIS to determine additional exposure to flood risk. Improved parcels in contact with the SFHA were considered at risk to the 1 percent annual chance flood. The count and total value of these parcels are summarized below. Note that this assessment does not account for the degree of exposure, so the result is a maximum exposure estimate for the modeled 1 percent annual chance flood. According to this assessment, roughly 43 percent of recent development in Currituck County is located in or near the SFHA.

Table A.16 – Recent Development at Risk to Flood, Currituck County

Recent Development at Risk		Percent of Total Recent Development	
Count of Parcels	Value of Parcels	Percent of Parcels	Percent of Values
1,463	\$303,181,700	43.0%	45.6%

Source: Parcel data retrieved November 2019; FEMA 2006 DFIRM

ANNEX A: CURRITUCK COUNTY UNINCORPORATED AREAS

Table A.17 provides building counts and estimated damages for Critical Infrastructure and Key Resources (CIKR) buildings by sector for the 1% annual chance flood event in Currituck County. Table A.18 provide building counts and estimated damages for High Potential Loss Properties exposed to the 1% annual chance flood.

Table A.17 – Critical Facilities Exposed to Flooding, Currituck County

Sector	Number of Buildings at Risk	Estimated Damages
Commercial Facilities	36	\$768,397
Critical Manufacturing	5	\$21,547
Food and Agriculture	41	\$136,631
Government Facilities	4	\$107,252
Transportation Systems	5	\$22,834
All Categories	91	\$1,056,661

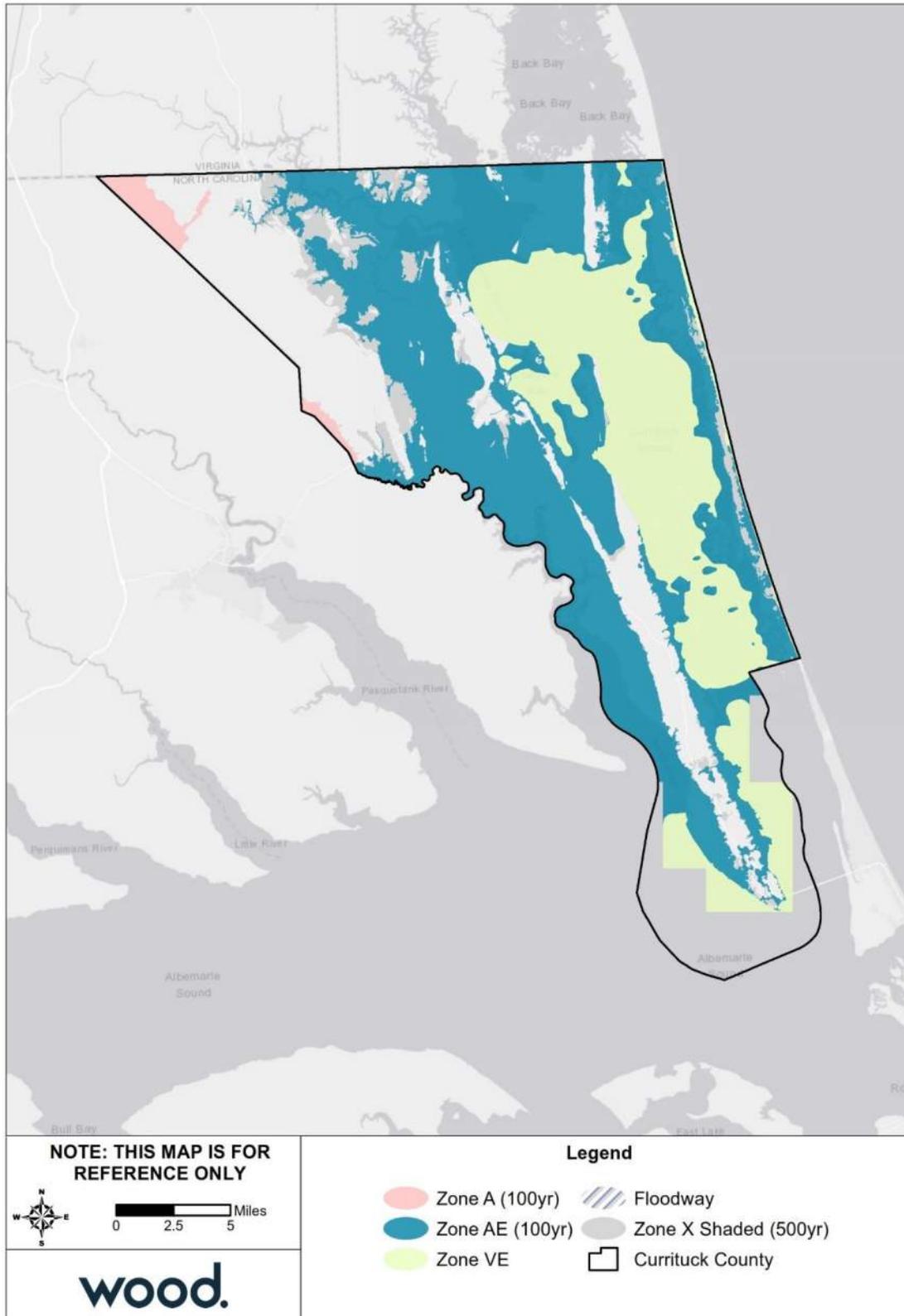
Source: NCEM Risk Management Tool

Table A.18 – High Potential Loss Properties Exposed to Flooding, Currituck County

Sector	Number of Buildings at Risk	Estimated Damages
Commercial	1	\$175,132
Residential	5	\$287,510
All Categories	6	\$462,642

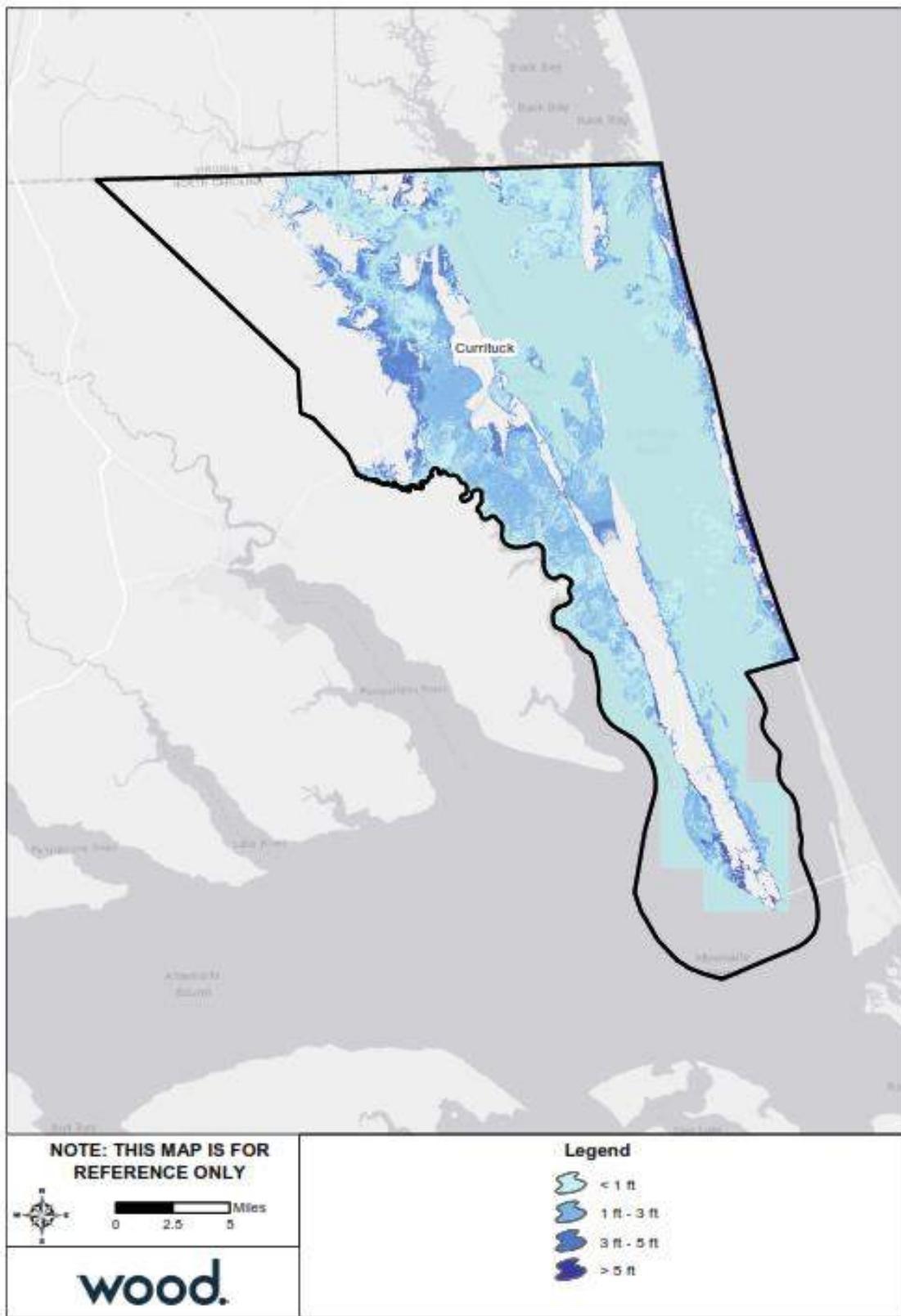
Source: NCEM Risk Management Tool

Figure A.5 – FEMA Flood Hazard Areas, 2006, Currituck County



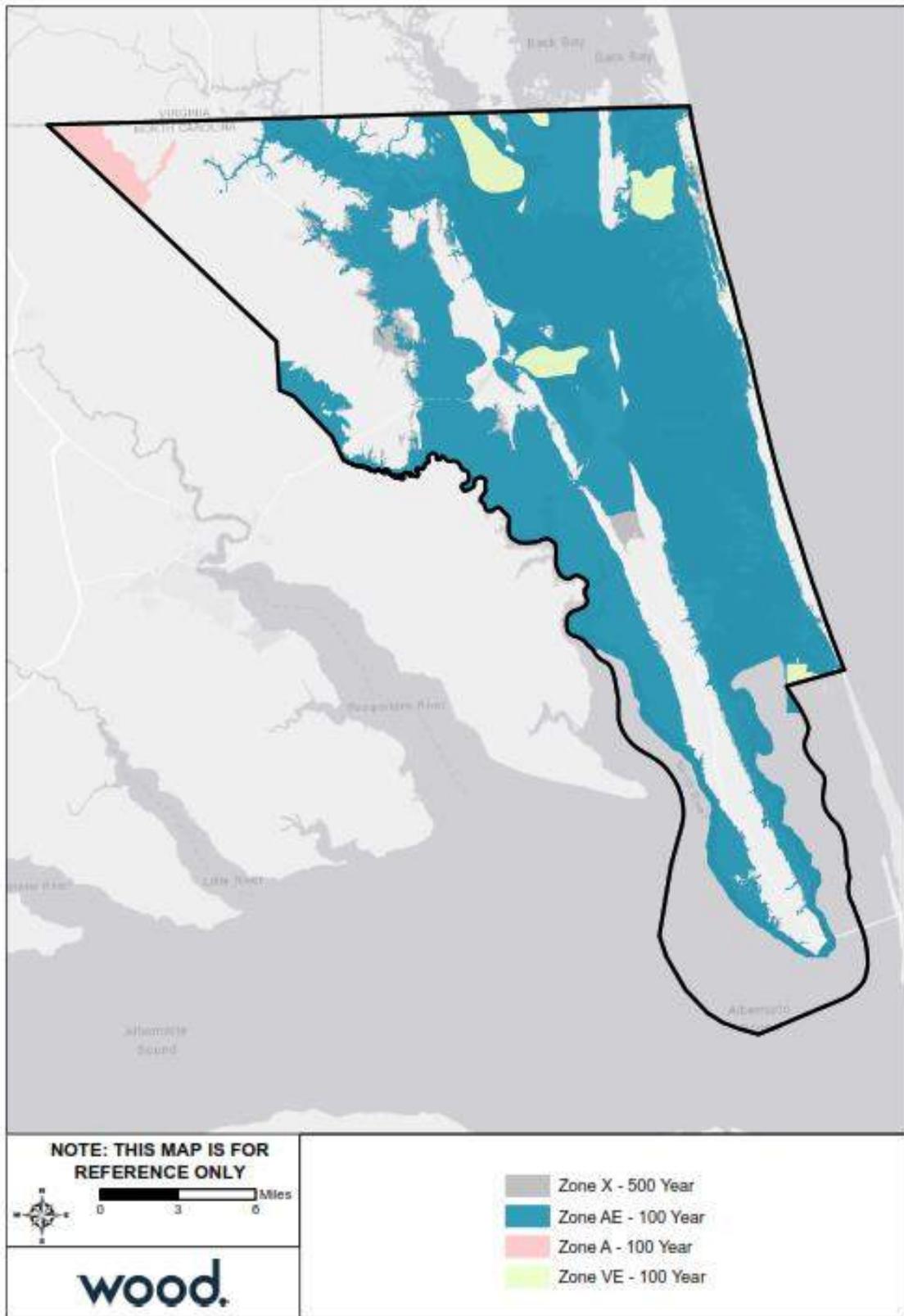
Source: FEMA 2006 DFIRM

Figure A.6 – Flood Depth, 1%-Annual-Chance Floodplain, 2006, Currituck County



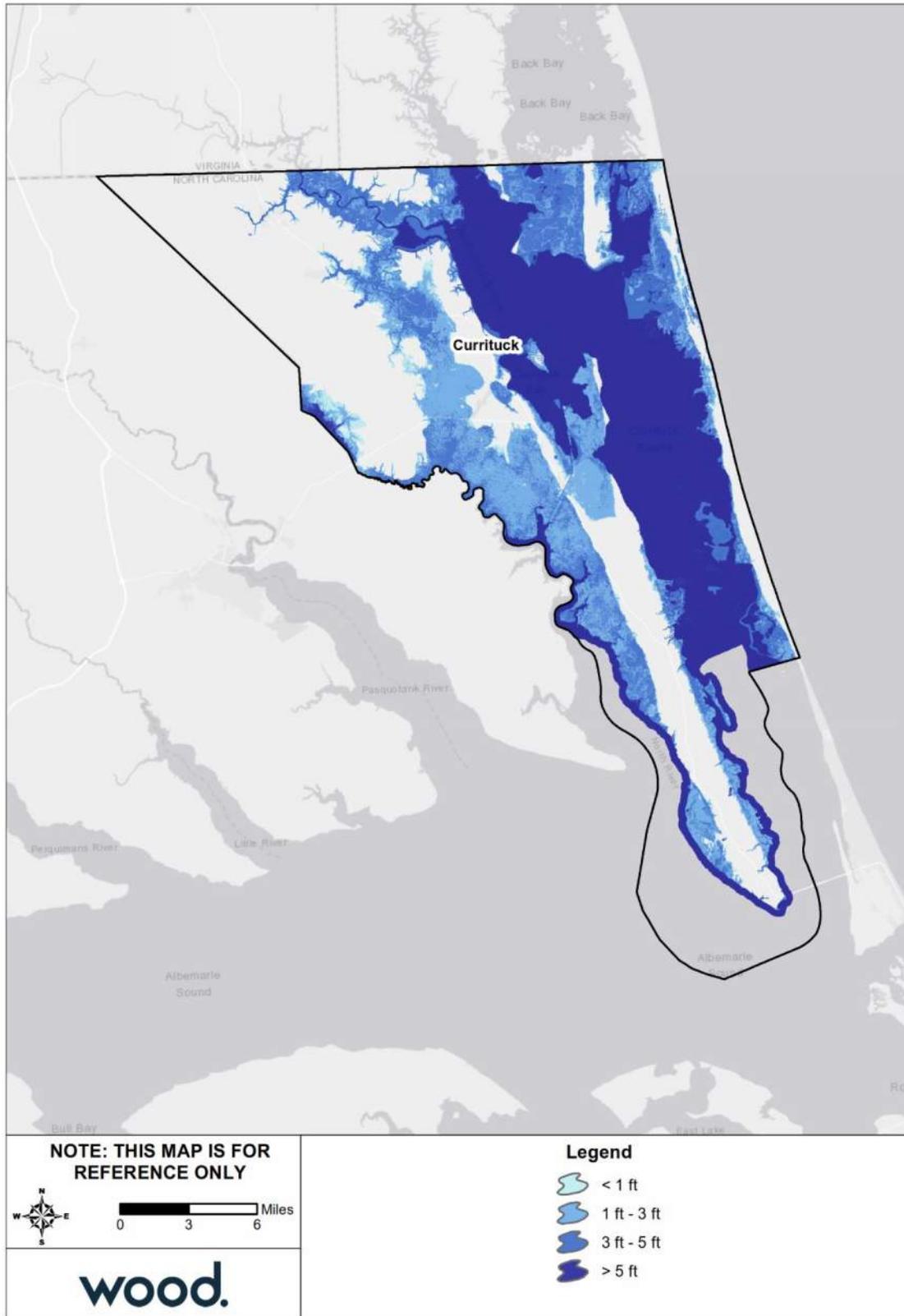
Source: FEMA 2006 DFIRM

Figure A.7 – FEMA Flood Hazard Areas, 2018, Currituck County



Source: FEMA 2018 DFIRM

Figure A.8 – Flood Depth, 1%-Annual-Chance Floodplain, 2018, Currituck County



Source: FEMA 2006 DFIRM

A.3.4 Wildfire

Table A.19 summarizes the acreage in Currituck County that falls within the Wildland Urban Interface (WUI), categorized by housing density. Areas in the WUI are those where development may intermix with flammable vegetation. Nearly 80 percent of Currituck County is not included in the WUI.

Table A.19 – Wildland Urban Interface Acreage, Currituck County

	Housing Density	Total Acreage	Percent of Total Acreage
	<i>Not in WUI</i>	226,103.3	79.7%
	LT 1hs/40ac	11,332.0	4.0%
	1hs/40ac to 1hs/20ac	6,998.6	2.5%
	1hs/20ac to 1hs/10ac	10,471.7	3.7%
	1hs/10ac to 1hs/5ac	9,712.2	3.4%
	1hs/5ac to 1hs/2ac	11,452.8	4.0%
	1hs/2ac to 3hs/1ac	7,562.7	2.7%
	GT 3hs/1ac	185.3	0.1%
	Total	283,818.5	

Source: Southern Wildfire Risk Assessment

Figure A.9 depicts the WUI for Currituck County. The WUI is the area where housing development is built near or among areas of vegetation that may be prone to wildfire. Figure A.10 depicts the Fire Intensity Scale, which indicates the potential severity of fire based on fuel loads, topography, and other factors. Figure A.11 depicts Burn Probability based on landscape conditions, percentile weather, historical ignition patterns, and historical prevention and suppression efforts.

Potential fire intensity is highest along the soundside and North River shorelines; however, these areas have low to moderate burn probability and/or are largely outside of the WUI, meaning little to no development is at risk. The areas of greatest risk in the County are in and around small unincorporated communities including Harbinger, Powells Point, Coinjock, Currituck, and Moyock where moderate fire intensity and burn probability abut or surround WUI areas.

Table A.20 provides building counts and estimated damages for Critical Infrastructure and Key Resources (CIKR) buildings by sector at risk to wildfire hazard in Currituck County. Table A.21 provides counts and estimated damages for High Potential Loss Properties in Currituck County.

Table A.20 – Critical Facilities Exposed to Wildfire, Currituck County

Sector	Number of Buildings at Risk	Estimated Damages
Banking and Finance	12	\$3,774,798
Chemical	1	\$78,007
Commercial Facilities	489	\$321,595,298
Communications	2	\$1,603,225
Critical Manufacturing	109	\$60,728,311
Emergency Services	8	\$14,558,656
Energy	4	\$20,363,915
Food and Agriculture	223	\$14,503,941

ANNEX A: CURRITUCK COUNTY UNINCORPORATED AREAS

Sector	Number of Buildings at Risk	Estimated Damages
Government Facilities	75	\$115,026,856
Healthcare and Public Health	26	\$13,563,814
Nuclear Reactors, Materials and Waste	1	\$327,280
Transportation Systems	107	\$68,696,604
Water	11	\$1,252,630
All Categories	1,068	\$636,073,335

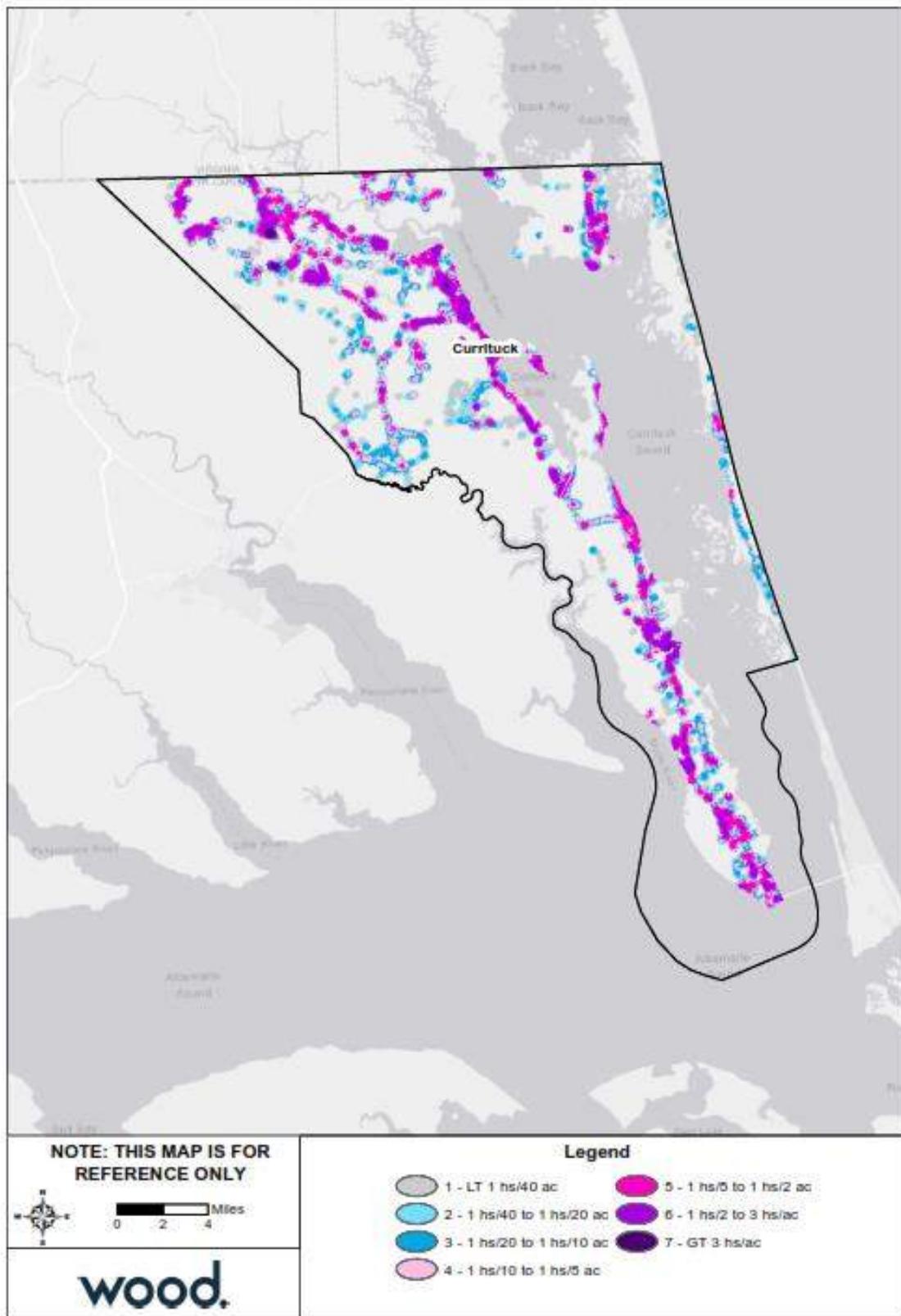
Source: NCEM Risk Management Tool

Table A.21 – High Potential Loss Properties Exposed to Wildfire, Currituck County

Category	Number of Buildings at Risk	Estimated Damages
Agricultural	1	\$1,147,900
Commercial	8	\$28,037,171
Government	8	\$45,318,493
Religious	3	\$12,244,019
Residential	3	\$5,364,060
Utilities	2	\$20,000,000
All Categories	25	\$112,111,643

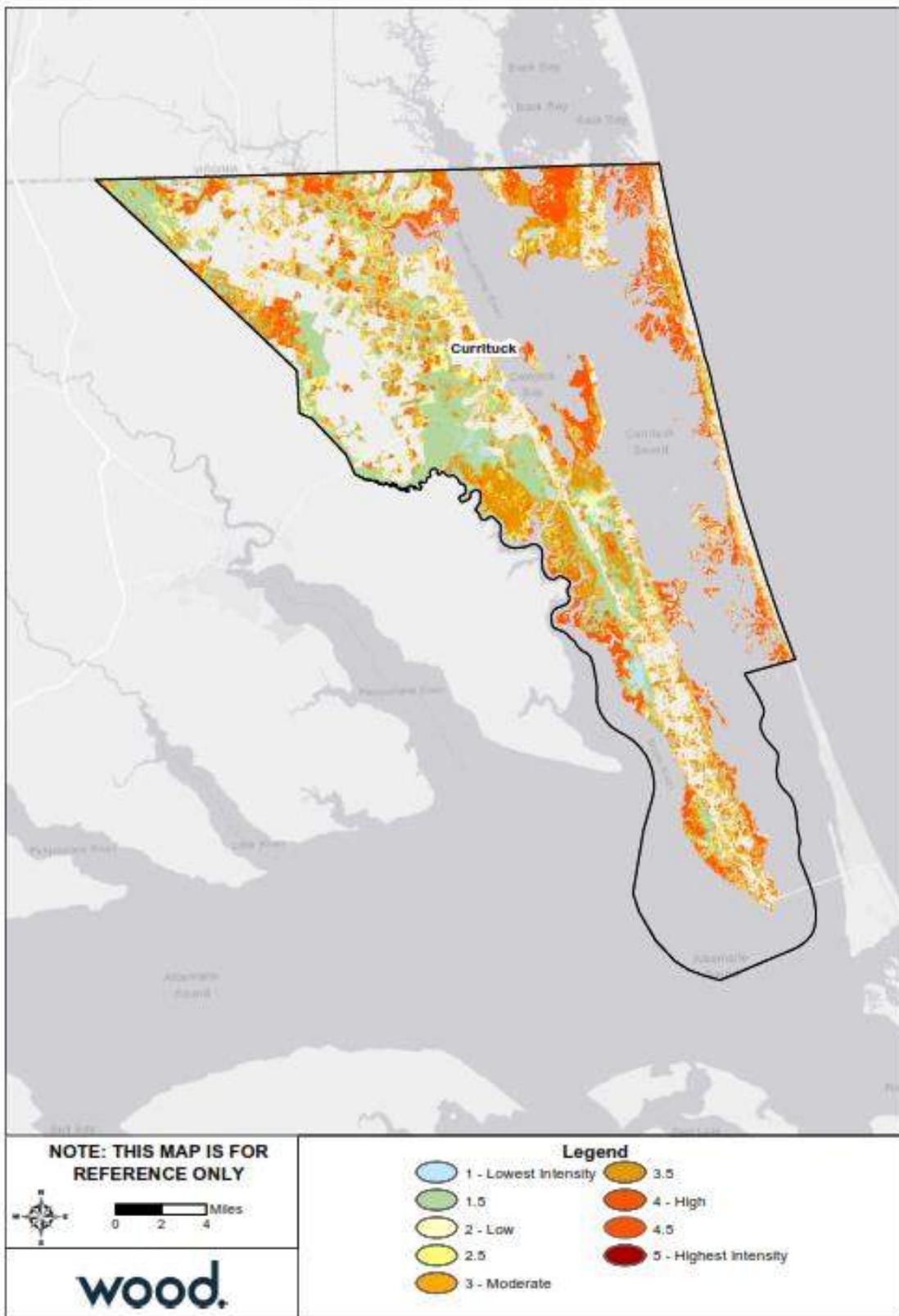
Source: NCEM Risk Management Tool

Figure A.9 – Wildland Urban Interface, Currituck County



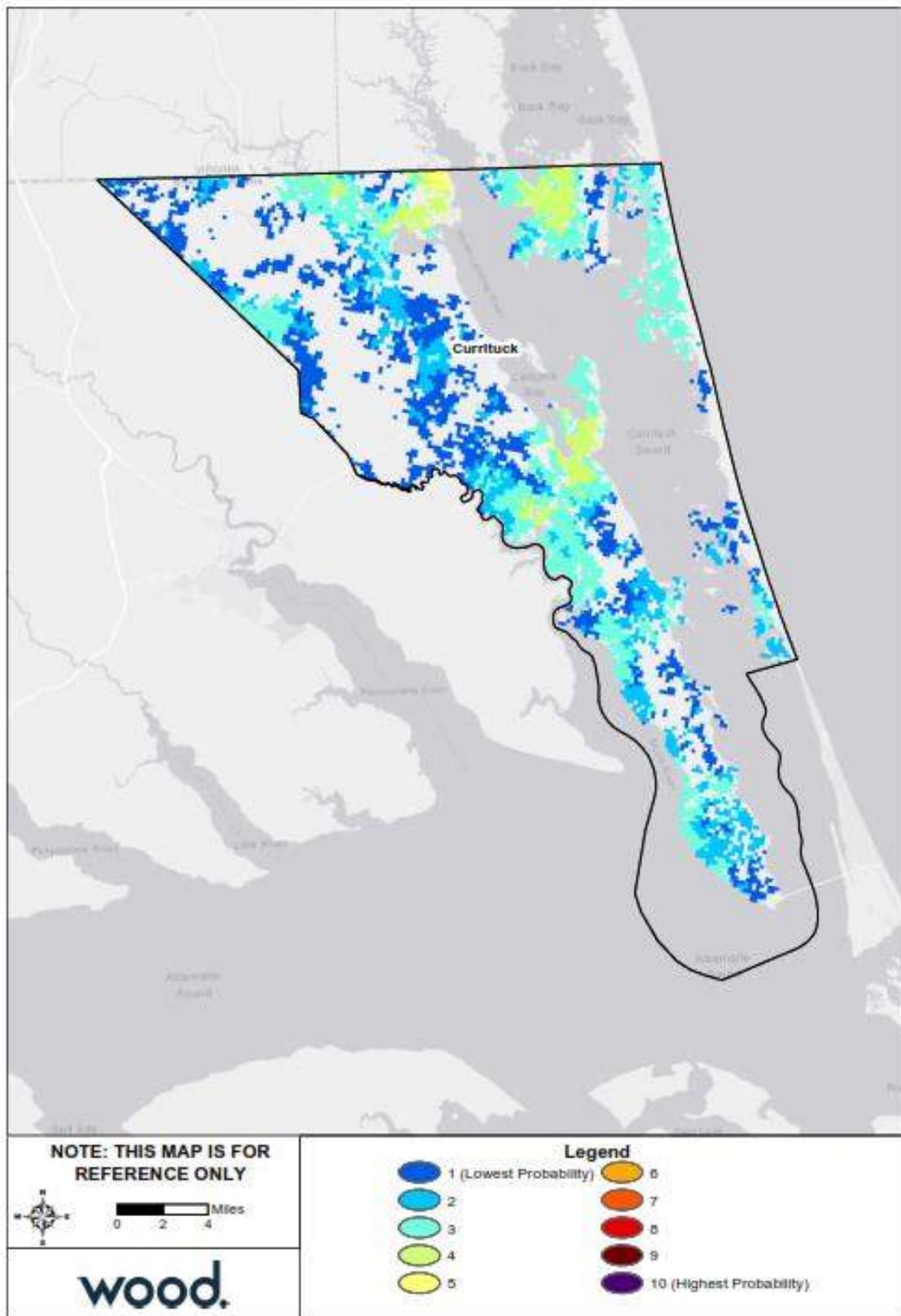
Source: Southern Wildfire Risk Assessment

Figure A.10 – Fire Intensity Scale, Currituck County



Source: Southern Wildfire Risk Assessment

Figure A.11 – Burn Probability, Currituck County



Source: Southern Wildfire Risk Assessment

A.4 CAPABILITY ASSESSMENT

A.4.1 Overall Capability

Details on the tools and resources in place and available to Currituck County were provided by the County’s HMPC representatives and are summarized in Section 5 Capability Assessment. Based on that information and using the scoring methodology detailed in that section, Currituck County has an overall capability rating of Moderate. The County’s Self-Assessment of key capability areas is summarized in Table A.22 below.

Table A.22 – Capability Self-Assessment, Currituck County

Capability Area	Rating
Plans, Ordinances, Codes and Programs	High
Administrative and Technical Capability	High
Fiscal Capability	High
Education and Outreach Capability	Moderate
Mitigation Capability	Moderate
Political Capability	Moderate
Overall Capability	High

A.4.2 Floodplain Management

Currituck County joined the NFIP emergency program in 1974 and has been a regular participant in the NFIP since November 1984. The following tables reflect NFIP policy and claims data for the County categorized by structure type, flood zone, Pre-FIRM and Post-FIRM.

Table A.23 – NFIP Policy and Claims Data by Structure Type

Structure Type	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
Single Family	4,456	\$2,714,413	\$1,342,976,300	1,323	\$19,022,562.92
2-4 Family	19	\$9,608	\$5,630,300	8	\$155,401.48
All Other Residential	51	\$17,614	\$10,328,300	5	\$69,279.51
Non-Residential	118	\$174,410	\$45,486,000	29	\$687,062.66
Total	4,644	\$2,916,045	\$1,404,420,900	1,365	\$19,934,306.57

Source: FEMA Community Information System, accessed December 2019

Table A.24 – NFIP Policy and Claims Data by Flood Zone

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	1,503	\$1,014,145	\$369,292,900	537	\$6,637,829.15
A Zones	4	\$4,736	\$453,000	6	\$87,749.00
V01-30 & VE Zones	23	\$124,224	\$6,121,700	10	\$134,764.42
B, C & X Zone					
Standard	329	\$578,331	\$95,518,800	393	\$6,288,386.82
Preferred	2,780	\$1,191,609	\$932,860,000	414	\$6,779,957.11
Total	4,639	\$2,913,045	\$1,404,246,400	1,360	\$19,928,686.50

Source: FEMA Community Information System, accessed December 2019

Table A.25 – NFIP Policy and Claims Data Pre-FIRM

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	379	\$442,458	\$74,556,700	327	\$5,139,658.27
A Zones	3	\$4,394	\$362,000	5	\$58,179.72
V01-30 & VE Zones	4	\$14,519	\$595,000	4	\$47,121.46
B, C & X Zone	304	\$177,479	\$89,935,600	64	\$1,005,106.10
Standard	46	\$71,229	\$11,682,600	27	\$523,965.88
Preferred	258	\$106,250	\$78,253,000	37	\$481,140.22
Total	690	\$638,850	\$165,449,300	400	\$6,250,065.55

Source: FEMA Community Information System, accessed December 2019

Table A.26 – NFIP Policy and Claims Data Post-FIRM

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	1,124	\$571,687	\$294,736,200	210	\$1,498,170.88
A Zones	1	\$342	\$91,000	1	\$29,569.28
V01-30 & VE Zones	19	\$109,705	\$5,526,700	6	\$87,642.96
B, C & X Zone	2,805	\$1,592,461	\$938,443,200	743	\$12,063,237.83
Standard	283	\$507,102	\$83,836,200	366	\$5,764,420.94
Preferred	2,522	\$1,085,359	\$854,607,000	377	\$6,298,816.89
Total	3,949	\$2,274,195	\$1,238,797,100	960	\$13,678,620.95

Source: FEMA Community Information System, accessed December 2019

A.5 MITIGATION STRATEGY

Action #	Action Description	Hazard(s) Addressed	Goal & Objective Addressed	Priority	Lead Agency / Department	Potential Funding Source	Implementation Timeline	2020 Status	2020 Implementation Status Comments
Prevention									
CUR1	Establish appropriate buffers/setbacks between critical facilities and other uses that may be incompatible	All Hazards	2.1	High	Planning	General Fund	On going	Carried Forward	Planning staff will coordinate with Emergency Management to evaluate current and planned critical facilities and determine where setbacks/buffers need to be maintained or increased. Need to re-evaluate this action in plan update.
CUR2	Maintain partnerships with adjacent counties and municipalities to leverage and share resources.	All Hazards	2.2	Moderate	Emergency Management	General Fund	On going	Carried Forward	Continuous - county-to-county mutual aid agreement
CUR3	Encourage clustering of residential lots outside of hazard areas in subdivision design/review and discourage development intensity and infrastructure improvements in known hazard areas	All Hazards	3.1	Moderate	Planning	General Fund	On going	Carried Forward	This is somewhat addressed by ordinance language but will be reinforced by policies in the new Land Use Plan.
CUR4	Direct development away from high-risk and vulnerable areas and establish redevelopment standards that decrease hazard risk	All Hazards	3.1	High	Planning	General Fund	On going	Carried Forward	We allow higher density development as an incentive for developers to place special flood hazard area portions of large tracts in perpetual conservation. Need to change to "Encourage" instead of "Direct." Conservation subdivision option in UDO. The new Coastal Resilience tool should also assist with this action.
Property Protection									
CUR5	Install back up generators at the Historic County Courthouse and the fuel farm.	All Hazards	2.2	Moderate	Emergency Management	HMGP Grant	2 years	New	HMGP 4393 project has been submitted; awaiting award determination
CUR6	Enhance existing and/or implement new groundwater lowering systems in low-lying coastal areas.	Coastal Hazards, Flood, Hurricane & Tropical Storm	1.2	Moderate	Stormwater Service Districts/ Engineering	Service District Taxes	On going	New	Lowering system in place at Whalehead subdivision with ongoing enhancements in place. Future system being pursued for Ocean Sands/Crown Point subdivision. New projects have been identified and expansion of existing systems are also planned.
CUR7	Support individuals and Homeowners Associations in acquiring funding for green stormwater infrastructure to mitigate nuisance flooding.	Coastal Hazards, Flood, Hurricane & Tropical Storm	1.2	Moderate	Soil & Water Conservation Board, Planning, Cooperative Extension	General Funds and Grants	On going	New	Soil & Stormwater Manager is working to identify problem areas to begin discussions with potential grant applicants. This action will be integrated by Soil & Water Conservation Board staff.
Natural Resource Protection									
CUR8	Preserve natural environmental features to naturally absorb water run-off and serve as wind buffers	Coastal Hazards, Flood, Hurricane & Tropical Storm, Severe Weather	3.2	Moderate	Planning	General Fund	On going	Carried Forward	Our Unified Development Ordinance contains provisions for preserving existing vegetation for buffers as well as preservation of wetland areas. Our stormwater manual contains water quality standards as well.
CUR9	Retain vegetation and require buffers in areas adjacent to wetlands, water bodies and Maritime forests	Coastal Hazards, Flood, Hurricane & Tropical Storm, Severe Weather	3.2	Moderate	Planning	General Fund	On going	Carried Forward	This is ongoing through a combination of wetland buffers, implementation of CAMA regulations, and heritage tree protection standards.
CUR10	Evaluate allocating a portion of occupancy tax toward the dune protection program and shoreline restoration, and expand extent of the dune protection program to include grant support of sand fencing.	Coastal Hazards, Flood, Hurricane & Tropical Storm, Severe Weather	3.2	High	Planning	Occ Tax	On going	Carried Forward	Revised to include pursuit of grant support for sand fencing. We are currently offering \$15,000 annually to the dune planting grant program.
CUR11	Work to pursue shoreline stabilization projects and regular shoreline monitoring.	Coastal Hazards	3.3	Moderate	Engineering	General Funds	On going	Carried Forward	This action was revised to be pursued locally rather than with DCM support and to focus on ongoing shoreline stabilization rather than an annual State of the Beach report.

ANNEX A: CURRITUCK COUNTY UNINCORPORATED AREAS

Action #	Action Description	Hazard(s) Addressed	Goal & Objective Addressed	Priority	Lead Agency / Department	Potential Funding Source	Implementation Timeline	2020 Status	2020 Implementation Status Comments
CUR12	Currituck Sound Coalition will prioritize marsh restoration planning and design for storm surge mitigation benefits.	Coastal Hazards	3.3	Moderate	Audubon, Planning, GIS, Soil & Water Conservation	General Funds	On going	Carried Forward	Revised. There has been no progress towards completing this action.
CUR13	Encourage linkage of existing and future open space areas to implement greenways throughout unique geographies of the county.	Coastal Hazards, Flood, Hurricane & Tropical Storm, Severe Weather	3.3	Moderate	Planning	No funding needed	On going	New	N/A
Structural Projects									
CUR14	Seek funding for public hazard mitigation projects.	All Hazards	1.2	Moderate	Emergency Management	Grant	On going	Carried Forward	County will continue to seek mitigation funding. Submitted 7 properties for elevation under Flood Mitigation Assistance grant program (2018); application currently under review with FEMA. Submitted 8 properties for HMGP - elevation following Hurricane Matthew but projects were not considered cost beneficial. Grant writing and monitoring added to Soil & Water admin position. Also monitoring EPA flood reduction grants.
CUR15	Continue to support efforts for planning, design, and construction of the Mid-County bridge project.	All Hazards	3.3	Moderate	Planning	NC Turnpike Authority	5 years	Carried Forward	Planning staff is working on terminus designs and studying impacts to properties on both sides of the bridge. Funding allocated in STIP for FY18; awaiting Record of Decision which should be issued spring/summer 2018.
CUR16	Identify bridges for retrofitting.	All Hazards	1.2	High	Planning	NCDOT	On going	Carried Forward	On going. Continuing to work with DOT to maintain roadways and the Wright Memorial Bridge.
CUR17	Secure funding, design, and construct an EOC/Public Safety Facility	All Hazards	3.3	High	Engineering/Emergency Management	General Fund/Grant	2 years	Carried Forward	Resolution for design-build project approved by BOC on March 5, 2018. Groundbreaking anticipated in late summer 2019.
Emergency Services									
CUR18	Maintain and work to improve radio communications and technology throughout public safety programs	All Hazards	4.2	High	Public Safety Agencies	General Funds and Grants	On going	Carried Forward	Continuous - Currently working on project to amplify the paging radio signal and broadcast it through a speaker system inside fire departments. County is also pursuing county-wide broadband internet service.
CUR19	Provide continuous training and information for first responders in hazard response	All Hazards	4.1	High	Public Safety Agencies	General Funds and Grants	On going	Carried Forward	Ongoing
CUR20	Coordinate response to bridge incidents for the Wright Memorial Bridge	Transportation Infrastructure Failure	4.1	High	Public Safety Agencies	General Funds/Grants	On going	Carried Forward	Response agencies coordinate on a regular basis. OBX LEPC held exercise in Jan. 2019 in which agencies responded to multi-vehicle accident with hazardous materials on the Wright Memorial Bridge. The LEPC will use lessons learned to improve response.
Public Education & Awareness									
CUR21	Educate the public and inform them of the benefits of participation in the Fire Wise program.	Wildfire	1.1	High	Emergency Management	Grant	On going	Carried Forward	NCFS continues to promote FireWise. FireWise success story: Point Harbor Beach community only had one access into the subdivision. The subdivision borders county-owned property, Sound Park. The County worked with the Point Harbor Beach community to install a gate in the existing fence line to provide secondary egress from the community in the event of an emergency.
CUR22	Educate homeowners and builders on the benefits of sprinkler systems in residential structures	Wildfire	1.1	Moderate	Fire Marshal/Planning	General Fund	On going	Carried Forward	Ongoing through the fire marshal and planning department. The County requested special legislation to address life safety issues in residential structures greater than 5,000 sq. feet, to include a requirement for residential sprinkler system. The request was denied.

ANNEX A: CURRITUCK COUNTY UNINCORPORATED AREAS

Action #	Action Description	Hazard(s) Addressed	Goal & Objective Addressed	Priority	Lead Agency / Department	Potential Funding Source	Implementation Timeline	2020 Status	2020 Implementation Status Comments
CUR23	Increase public awareness and understanding of the locations and proper way to dispose of hazardous waste	Hazardous Materials Incident	1.1	Moderate	Public Works	General Fund	On going	Carried Forward	PW continues to sponsor an annual household hazardous waste day
CUR24	Periodically survey the public to evaluate if public outreach efforts are effective in identifying potential flood hazards, public concern, and ways to mitigate against hazards	Coastal Hazards, Flood, Hurricane & Tropical Storm	1.1	Moderate	Planning	General Fund	On going	Carried Forward	The floodplain manager and the assistant planning director will work together to create a survey.
CUR25	Develop a joint public outreach document that addresses all hazards (published by the Planning and Emergency Management Departments)	All Hazards	1.1	High	Planning/Emergency Management	General Fund	On going	Carried Forward	The planning department and the emergency management department publish documents in the "Focus on Currituck" publication. New release of CRS Manual for 2018 requires greater public outreach efforts; revising public outreach campaign by August of 2018.
CUR26	Evaluate effectiveness of Currituck's warning systems	All Hazards	1.1	High	Emergency Management	General Fund	On going	Carried Forward	Number of individuals registering for Currituck Alert provides a baseline for effectiveness of mass notification. Planning a campaign to increase awareness of ENS and increase number of subscribers.
CUR27	Educate and assist vulnerable populations in developing personal preparedness plans	All Hazards	1.1	High	Emergency Management	General Fund	On going	Carried Forward	Continuous
CUR28	Partner with other County Departments, State, local agencies to educate and inform vulnerable populations about special needs registry with Social Services through community outreach (survey, website, social media, water bill)	All Hazards	1.1	High	DSS, EM, PIO	General Fund	On going	Carried Forward	Continuous
CUR29	Create curriculums for all hazards preparedness to better educate the public	All Hazards	1.1	High	Emergency Management	General Fund/Grants	less than 5 years	Carried Forward	No progress
CUR30	Continue to educate elected officials and the public on the need for and benefits of sustained shoreline management strategies.	Coastal Hazards, Flood, Hurricane & Tropical Storm, Severe Weather	1.1	High	Planning	General Fund	On going	Carried Forward	Staff continues to share information with elected officials and the public.
CUR31	Educate property owners on the natural and beneficial functions of floodplains, watersheds, and other natural/coastal areas.	Coastal Hazards, Flood, Hurricane & Tropical Storm	3.2	Moderate	Planning	General Fund	On going	Carried Forward	We hope to include this information in our updated outreach project
CUR32	Educate the development and agricultural communities as well as the public on the impacts of turbidity on floodplain/natural areas and mitigating best management practices	Coastal Hazards, Flood, Hurricane & Tropical Storm	3.2	Moderate	Soil & Water Conservation Board, Planning, Cooperative Extension	General Fund	On going	Carried Forward	We will try to include this in the updated outreach project.
CUR33	Develop outreach materials and offer training on Low Impact Development (LID) best management practices that can be distributed to the public and engineering communities.	Coastal Hazards, Flood, Hurricane & Tropical Storm	3.2	High	Soil & Water Conservation Board, Planning, Cooperative Extension	General Fund	less than 5 years	Carried Forward	The stormwater manual addresses this. Training has not been offered yet.
CUR34	Send targeted outreach on flood risk, preparedness, insurance and mitigation options to repetitive loss property owners	Coastal Hazards, Flood, Hurricane & Tropical Storm	1.1	High	Planning	General Fund	1 year	New	This action will be integrated with the County's Program for Public Information efforts
CUR35	Send targeted outreach on flood risk, preparedness, insurance, and mitigation options to pre-FIRM property owners	Coastal Hazards, Flood, Hurricane & Tropical Storm	1.1	High	Planning	General Fund	1 year	New	This action will be integrated with the County's Program for Public Information efforts

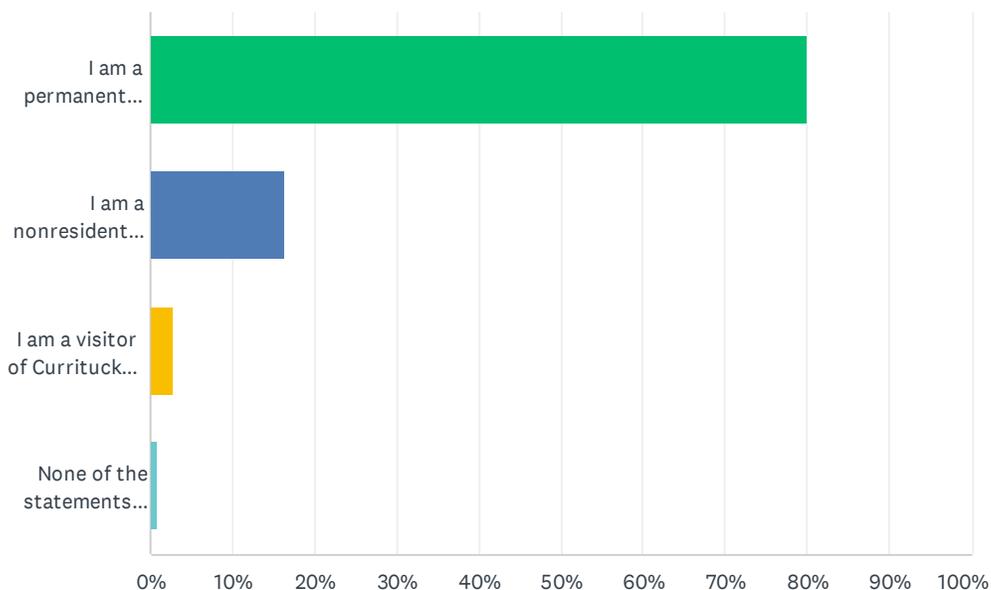


Appendix C: Community Questionnaire Results

- ◆ 1st Questionnaire Results (Community Response)
- ◆ 2nd Questionnaire Results (Community Response)
- ◆ 2nd Questionnaire (CAT Response)

Q1 Select the statement that best describes you.

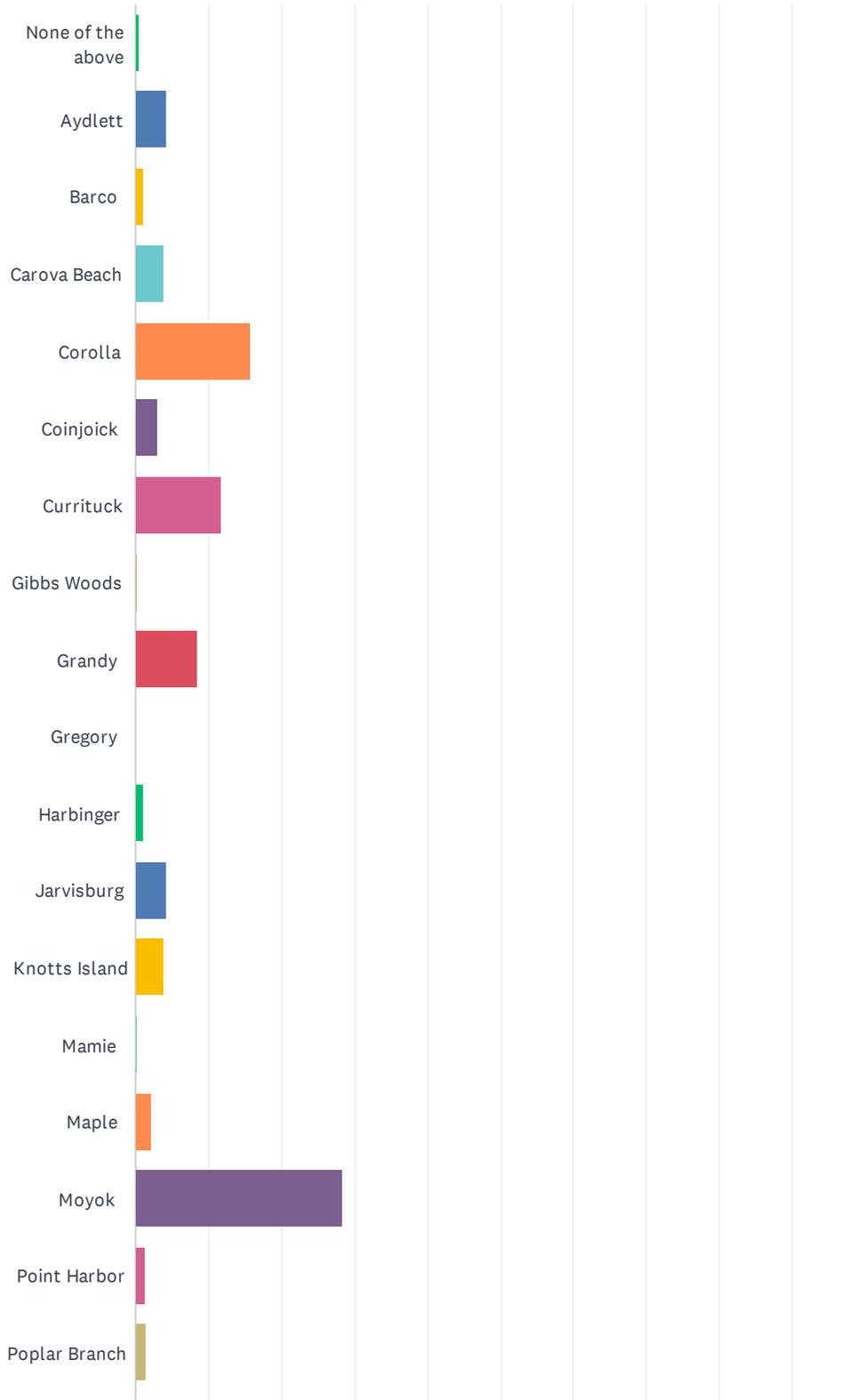
Answered: 921 Skipped: 0



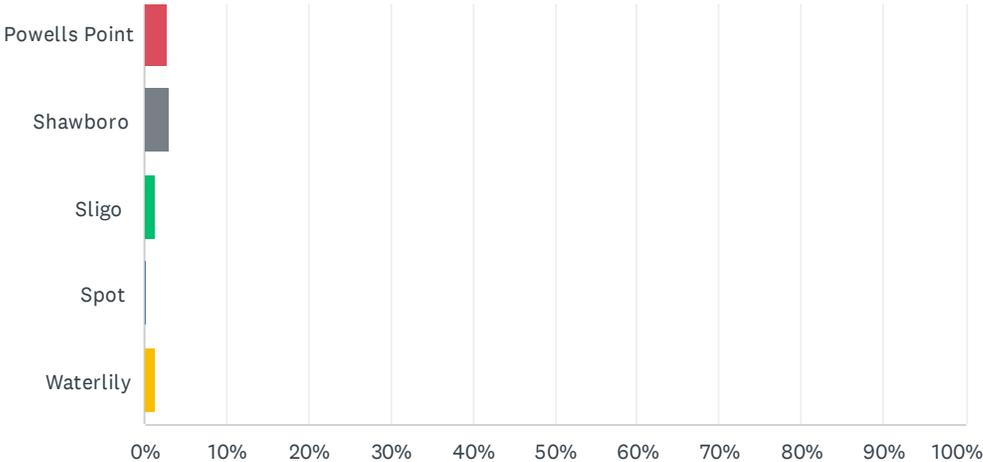
ANSWER CHOICES	RESPONSES	
I am a permanent resident of Currituck County.	80.02%	737
I am a nonresident property owner in Currituck County.	16.50%	152
I am a visitor of Currituck County.	2.71%	25
None of the statements above describe me.	0.76%	7
TOTAL		921

Q2 You answered, "I am a permanent resident of Currituck County." Are you a resident of any of the following communities? If so, select the community below. If not, select "None of the above."

Answered: 731 Skipped: 190



Currituck County Coastal Resilience Questionnaire

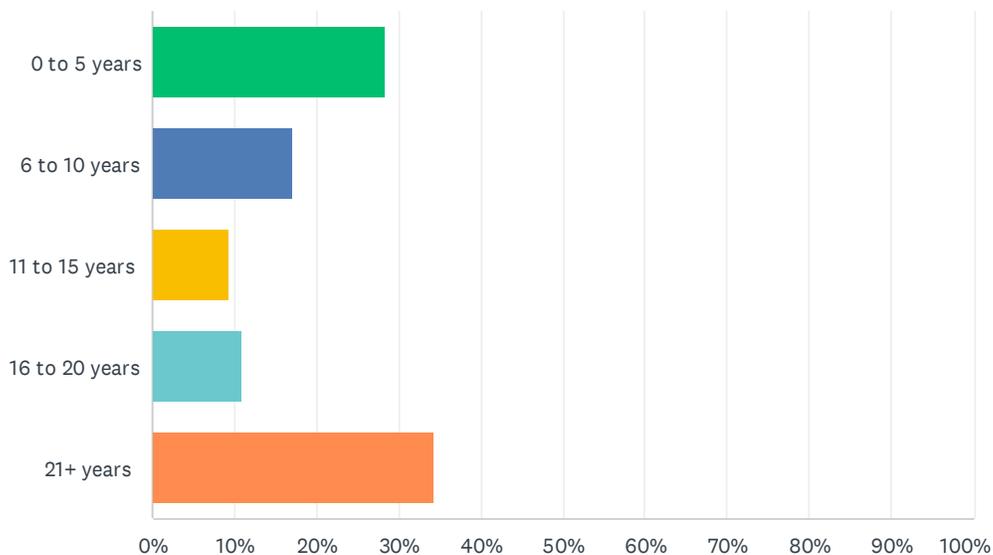


Currituck County Coastal Resilience Questionnaire

ANSWER CHOICES	RESPONSES	
None of the above	0.41%	3
Aydlett	4.24%	31
Barco	1.09%	8
Carova Beach	3.83%	28
Corolla	15.87%	116
Coinjoick	3.01%	22
Currituck	11.63%	85
Gibbs Woods	0.14%	1
Grandy	8.62%	63
Gregory	0.00%	0
Harbinger	1.09%	8
Jarvisburg	4.24%	31
Knotts Island	3.83%	28
Mamie	0.14%	1
Maple	2.05%	15
Moyok	28.45%	208
Point Harbor	1.37%	10
Poplar Branch	1.50%	11
Powells Point	2.74%	20
Shawboro	3.01%	22
Sligo	1.23%	9
Spot	0.14%	1
Waterlily	1.37%	10
TOTAL		731

Q3 You answered, "I am a permanent resident of Currituck County." How long have you lived in Currituck County?

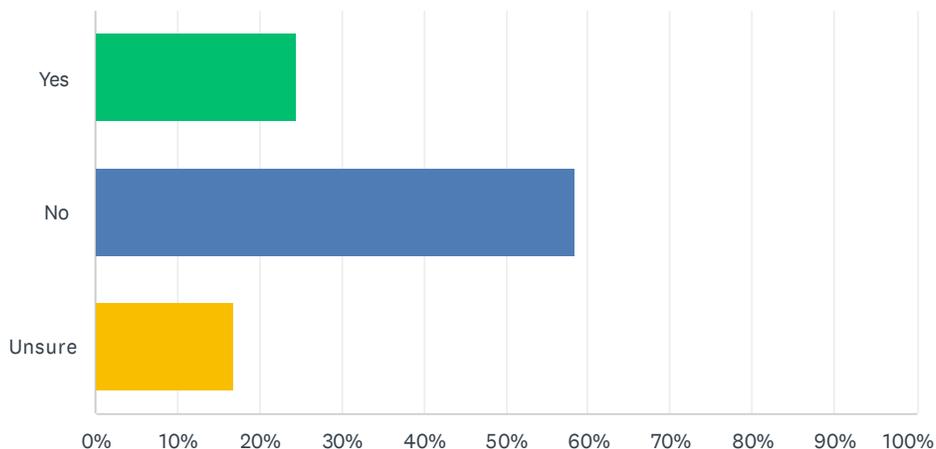
Answered: 731 Skipped: 190



ANSWER CHOICES	RESPONSES
0 to 5 years	28.32% 207
6 to 10 years	16.96% 124
11 to 15 years	9.44% 69
16 to 20 years	10.94% 80
21+ years	34.34% 251
TOTAL	731

Q4 You indicated that you are a permanent resident or property owner in Currituck County. Is your residence or property located in a FEMA floodplain?

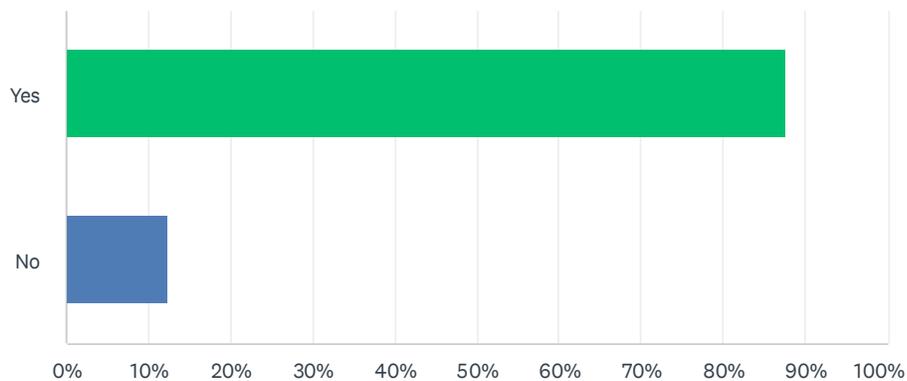
Answered: 863 Skipped: 58



ANSWER CHOICES	RESPONSES	
Yes	24.57%	212
No	58.52%	505
Unsure	16.92%	146
TOTAL		863

Q5 You answered, "I am a visitor of Currituck County." Have you visited Currituck County within the past year?

Answered: 146 Skipped: 775

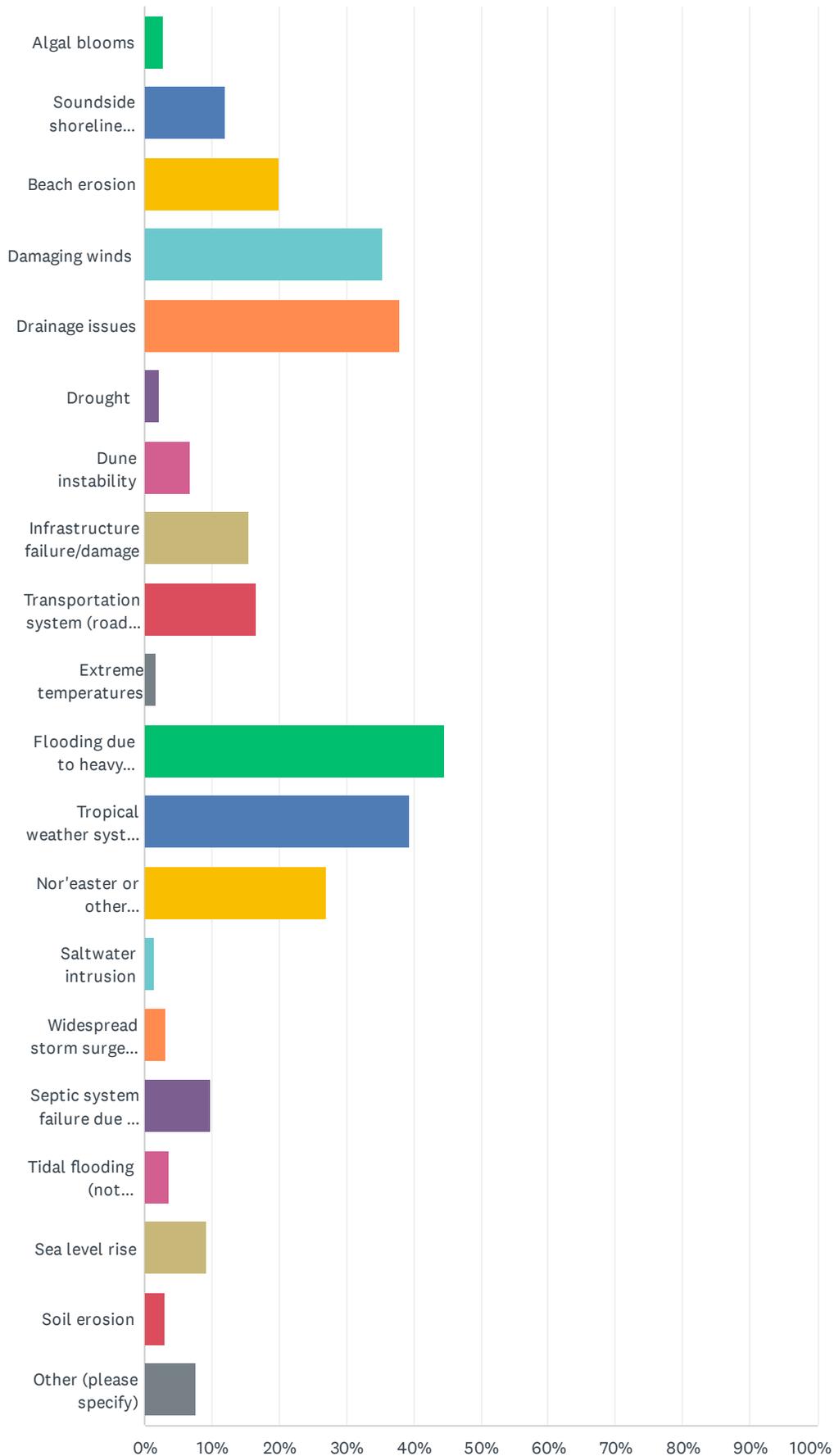


ANSWER CHOICES	RESPONSES
Yes	87.67% 128
No	12.33% 18
TOTAL	146

Q6 Of the following hazards, select 3 that are the most significant or threatening to you.

Answered: 762 Skipped: 159

Currituck County Coastal Resilience Questionnaire



Currituck County Coastal Resilience Questionnaire

ANSWER CHOICES	RESPONSES	
Algal blooms	2.76%	21
Soundside shoreline erosion	11.94%	91
Beach erosion	20.08%	153
Damaging winds	35.30%	269
Drainage issues	38.06%	290
Drought	2.23%	17
Dune instability	6.82%	52
Infrastructure failure/damage	15.62%	119
Transportation system (roads and ferries) closures or delays over 12 hours	16.54%	126
Extreme temperatures	1.71%	13
Flooding due to heavy precipitation/stormwater management issues	44.49%	339
Tropical weather systems including depressions, storms, and hurricanes	39.37%	300
Nor'easter or other non-tropical weather systems	27.03%	206
Saltwater intrusion	1.44%	11
Widespread storm surge inundation	3.28%	25
Septic system failure due to flooding	9.84%	75
Tidal flooding (not storm-related)	3.67%	28
Sea level rise	9.19%	70
Soil erosion	2.89%	22
Other (please specify)	7.74%	59
Total Respondents: 762		

#	OTHER (PLEASE SPECIFY)	DATE
1	we have poor drainage when it floods	1/20/2022 2:13 PM
2	Encouraging too much growth and development.	1/20/2022 9:31 AM
3	Roads are terrible	1/13/2022 5:34 PM
4	Overdevelopment	1/13/2022 10:10 AM
5	Lack of county planning for growth	1/12/2022 7:31 AM
6	Widening of Aydlett backroads due to population increase.	1/11/2022 12:57 PM
7	Noted infrastructure, highways. Need to stop building until highway system can support traffic. Peak Season issue. People are going elsewhere.	1/10/2022 8:27 PM
8	Power outages	1/10/2022 4:21 AM
9	3	1/9/2022 10:09 PM
10	No issue w/ hazards	1/9/2022 6:18 PM
11	Too much building with no infrastructure or concern for schools. Failure to leave land on the main corridor for business.	1/9/2022 7:59 AM
12	Traffic conditions during "in season" traveling thru the Mainland to the OBX	1/8/2022 8:50 PM

Currituck County Coastal Resilience Questionnaire

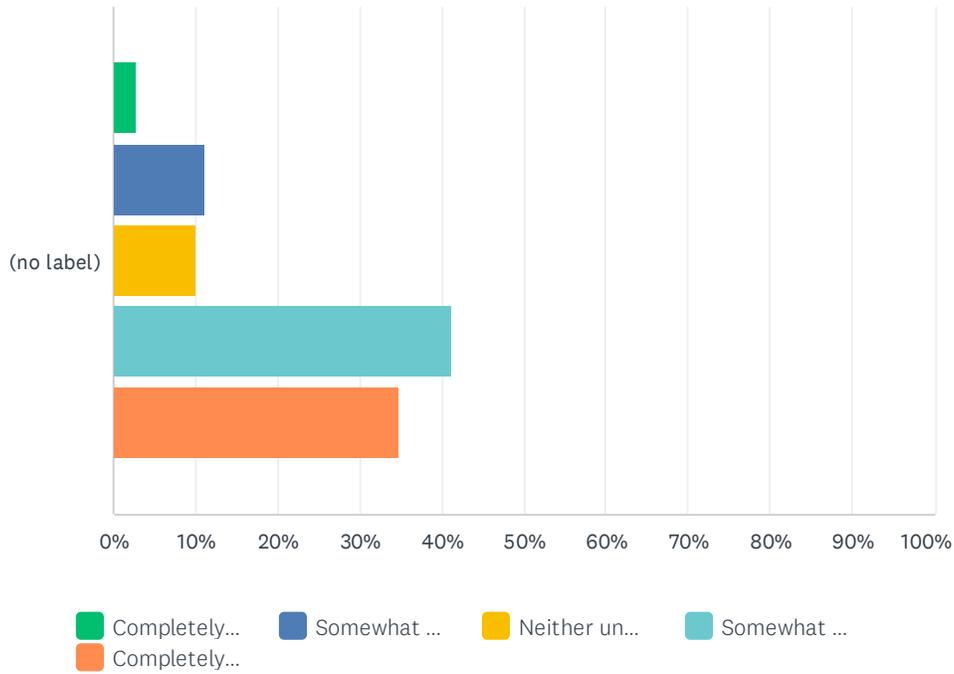
13	Contaminated well water	1/8/2022 2:08 PM
14	Waste water treatment plant failure when it rains heavily...northeastern, other storms	1/7/2022 7:37 PM
15	Single exit route off island	1/5/2022 6:58 PM
16	Land development	1/5/2022 1:02 PM
17	Developments - Traffic/Roads in a state of disrepair/major drainage issues/vehicle accidents	1/5/2022 3:44 AM
18	Needing access to beaches like mid currituck bridge	1/4/2022 11:20 PM
19	Lack of fire hydrants	1/4/2022 3:02 PM
20	So Many Potholes on NC 12 north	1/4/2022 1:17 AM
21	Severe over crowding in the 4x4 area	1/3/2022 5:58 PM
22	Mold/mildew	1/3/2022 2:26 PM
23	The solar farm in Grandy that had panel blow off during tropical storm conditions- NOT what was promised from the builder	1/3/2022 11:50 AM
24	I don't want the bridge to be built. It will destroy this area. We lived in KDH all our lives and moved here for the beauty and tranquility.	1/3/2022 11:02 AM
25	Over building, removing trees, increasing flooding issues	1/3/2022 10:48 AM
26	Traffic to northern beaches	1/2/2022 10:40 PM
27	We need county waste treatment	1/2/2022 6:03 PM
28	Roads in 4x4 non passable and beach	1/2/2022 5:19 PM
29	Irresponsible overbuilding	1/2/2022 4:49 PM
30	Lack of sidewalk, boat ramp, local representation	1/2/2022 12:53 PM
31	Street frontage for homes odu and front steps set back udo revised	1/2/2022 12:14 PM
32	Tourist an county commissioners	1/2/2022 11:46 AM
33	Overcrowding	1/2/2022 10:53 AM
34	Lack of local housing	1/2/2022 4:35 AM
35	Water quality and over development	1/1/2022 8:48 PM
36	Canal needs dredged	1/1/2022 8:31 PM
37	Honestly, I think we as a community have done an amazing job. Now, tornado, been through one. It is not a hurricane. So unpredictable. Currituck is does it's best.	1/1/2022 7:35 PM
38	Road quality in the 4x4 areas and the recurring damage done by high traffic from horse tours.	1/1/2022 3:37 PM
39	Summertime traffic, amount of fatal accidents	1/1/2022 3:12 PM
40	Delay in building Currituck sound bridge	1/1/2022 2:07 PM
41	Overdevelopment	1/1/2022 2:06 PM
42	Uncontrolled growth and no affordable housing	1/1/2022 1:27 PM
43	Fire, due to high winds and drought	1/1/2022 8:44 AM
44	Traffic	1/1/2022 6:28 AM
45	Contamination/Lack of clean drinking water	1/1/2022 5:57 AM
46	Tourism impact on the beach ecosystem	12/31/2021 9:33 PM
47	Better water runoff management when lots are filled higher than existing homes?	12/31/2021 9:14 PM
48	Development	12/31/2021 8:17 PM
49	Over building	12/31/2021 7:21 PM
50	Don't have a 3rd	12/31/2021 5:22 PM

Currituck County Coastal Resilience Questionnaire

51	Yankees	12/31/2021 3:52 PM
52	Unmaintained streets	12/31/2021 12:50 PM
53	Sewage issues in Eaglecreek	12/31/2021 12:10 PM
54	Excessive traffic during tourist season that could be mitigated with a mid county bridge	12/31/2021 8:42 AM
55	Biased surveys designed to make problems of natural occurrence	12/31/2021 7:18 AM
56	TOO MANY HOUSES. Woods and fields absorb the rain. Houses don't.	12/31/2021 1:11 AM
57	Over building and population and tourists	12/30/2021 11:02 PM
58	Fire protection	12/30/2021 7:20 PM
59	Increased traffic volume on fragile road due to KOA campground	12/30/2021 6:12 PM

Q7 On a scale of 1 to 5, where 1 is "completely unable" and 5 is "completely able," how would you rate Currituck County's ability to withstand and recover from a minor storm event?

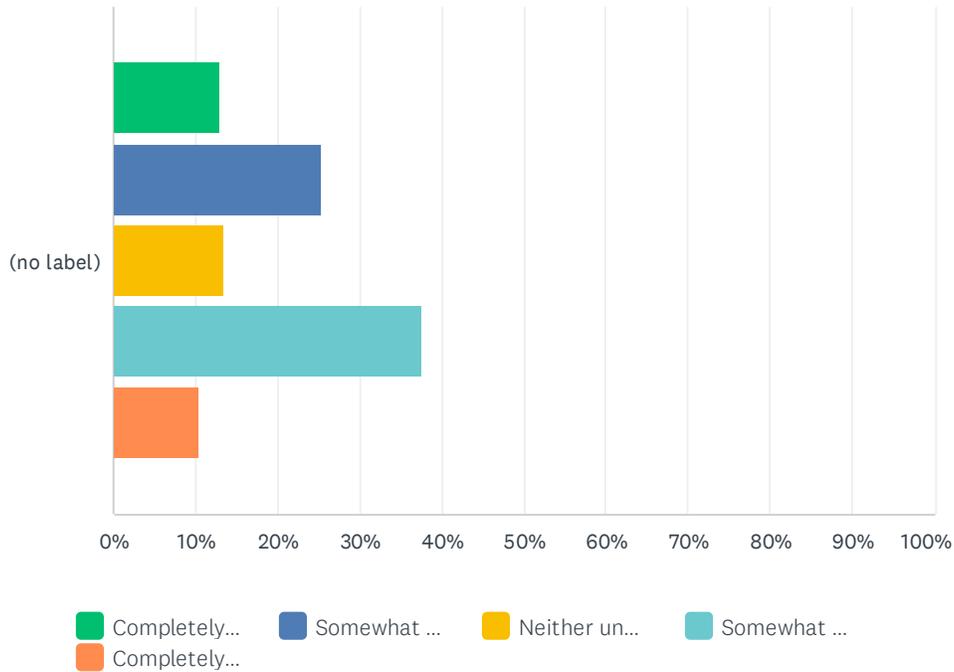
Answered: 762 Skipped: 159



	COMPLETELY UNABLE	SOMEWHAT UNABLE	NEITHER UNABLE NOR ABLE	SOMEWHAT ABLE	COMPLETELY ABLE	TOTAL	WEIGHTED AVERAGE
(no label)	2.76% 21	11.15% 85	10.10% 77	41.21% 314	34.78% 265	762	3.91

Q8 On a scale of 1 to 5, where 1 is "completely unable" and 5 is "completely able," how would you rate Currituck County's ability to withstand and recover from a major storm event?

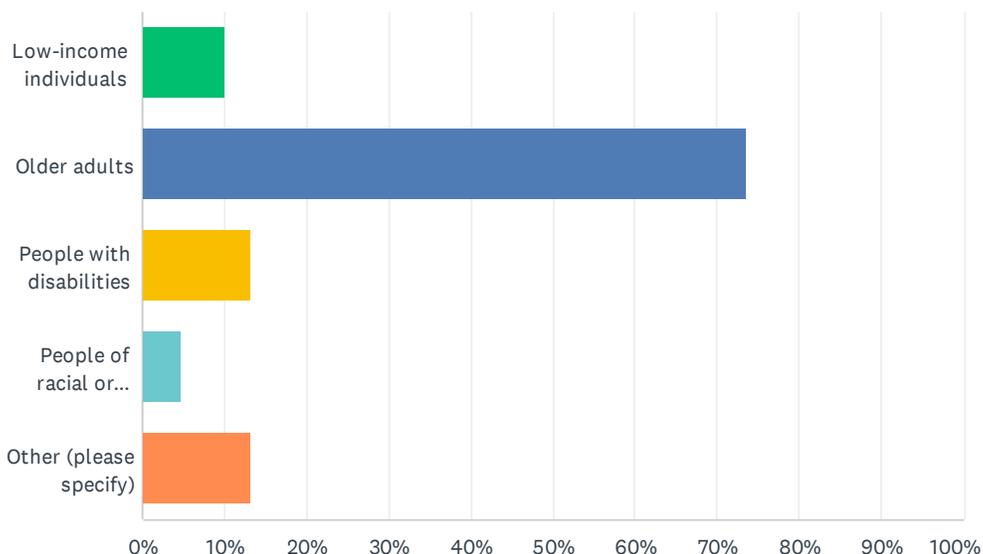
Answered: 762 Skipped: 159



	COMPLETELY UNABLE	SOMEWHAT UNABLE	NEITHER UNABLE NOR ABLE	SOMEWHAT ABLE	COMPLETELY ABLE	TOTAL	WEIGHTED AVERAGE
(no label)	12.99% 99	25.46% 194	13.52% 103	37.53% 286	10.50% 80	762	2.94

Q9 Do you identify with any of these populations?

Answered: 502 Skipped: 419



ANSWER CHOICES	RESPONSES
Low-income individuals	9.96% 50
Older adults	73.51% 369
People with disabilities	13.15% 66
People of racial or ethnic minorities	4.78% 24
Other (please specify)	13.15% 66
Total Respondents: 502	

#	OTHER (PLEASE SPECIFY)	DATE
1	No	1/20/2022 1:31 PM
2	NA	1/20/2022 11:50 AM
3	No	1/19/2022 5:51 PM
4	Upper middle class 50+	1/18/2022 5:29 PM
5	Racial question I refuse to answer	1/12/2022 2:26 PM
6	Hard working farmer	1/12/2022 7:31 AM
7	Average middle age adult	1/11/2022 11:16 PM
8	None	1/11/2022 7:54 PM
9	I'm middle/upper working class	1/11/2022 11:21 AM
10	None	1/10/2022 10:04 PM
11	Regular Visitor	1/10/2022 9:24 PM
12	Middle class	1/10/2022 4:40 PM

Currituck County Coastal Resilience Questionnaire

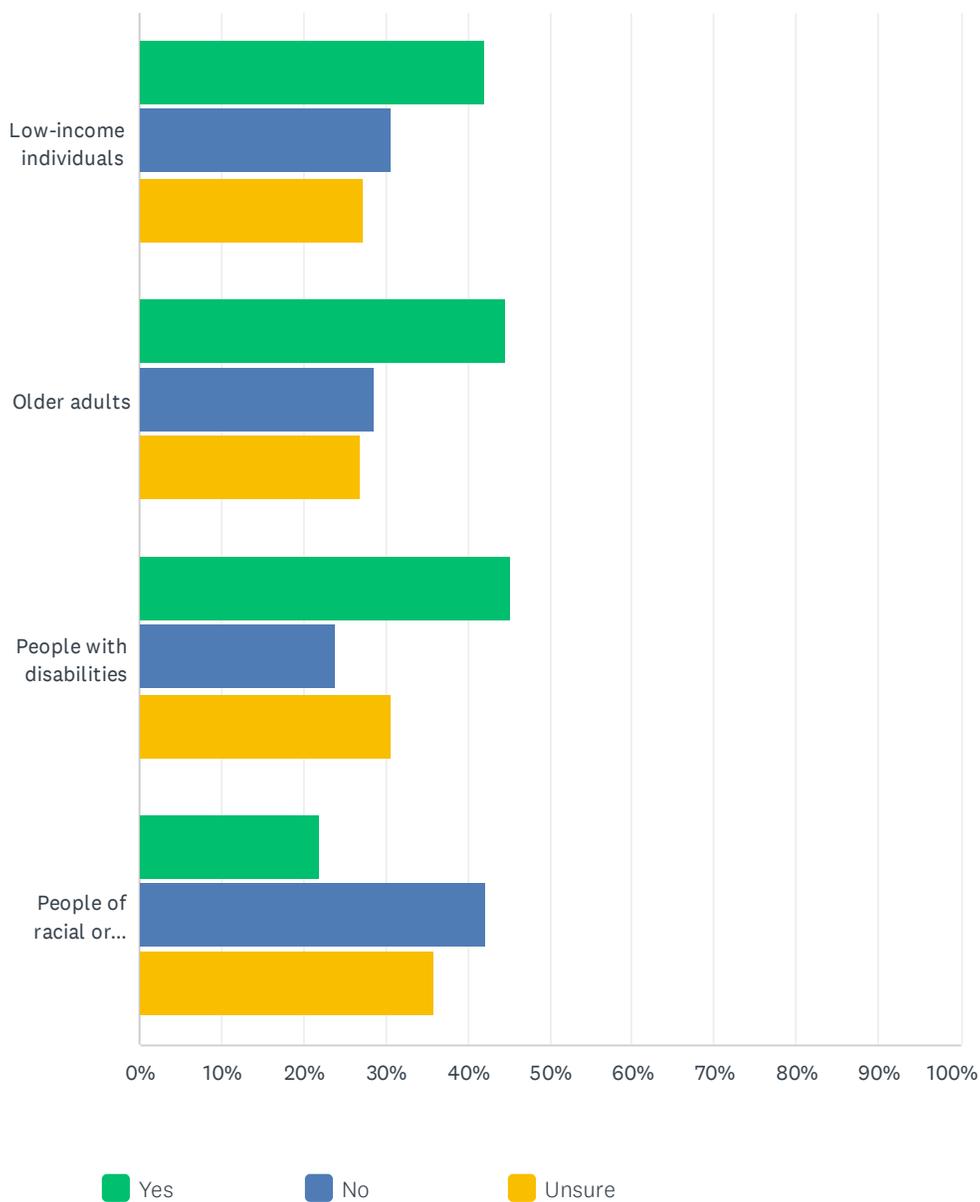
13	None of the above	1/10/2022 10:00 AM
14	None	1/9/2022 7:29 PM
15	Retired Civil Service	1/8/2022 10:30 PM
16	I am a middle aged woman	1/8/2022 9:31 PM
17	Working Native	1/8/2022 8:52 PM
18	None	1/8/2022 9:14 AM
19	No	1/8/2022 7:19 AM
20	Disease that lowers immune system	1/7/2022 7:38 PM
21	Working age	1/7/2022 6:25 PM
22	Middle class	1/7/2022 10:00 AM
23	Working adults	1/6/2022 1:18 PM
24	over taxed underserved area	1/6/2022 8:16 AM
25	Retired	1/6/2022 6:43 AM
26	LGBTQ	1/4/2022 11:21 PM
27	none of the above	1/4/2022 1:42 PM
28	N/A	1/4/2022 8:36 AM
29	Over Taxed	1/4/2022 1:20 AM
30	Middle class white	1/3/2022 4:39 PM
31	None	1/3/2022 3:23 PM
32	Middle class	1/2/2022 8:54 PM
33	None	1/2/2022 8:07 PM
34	Supporting a family	1/2/2022 6:04 PM
35	Tax payer	1/2/2022 2:03 PM
36	I'm white, rich & non-disabled, but why would you care?	1/2/2022 2:03 PM
37	Business owner	1/2/2022 1:02 PM
38	Local business owner and resident	1/2/2022 12:54 PM
39	No	1/2/2022 12:42 PM
40	None	1/2/2022 12:35 PM
41	Mid age, mid income	1/2/2022 12:15 PM
42	All	1/2/2022 12:15 PM
43	No	1/2/2022 11:28 AM
44	Middle class	1/2/2022 7:19 AM
45	I have disabilities.	1/1/2022 7:36 PM
46	None of the above	1/1/2022 7:23 PM
47	50 year old	1/1/2022 5:18 PM
48	Middle Age	1/1/2022 3:14 PM
49	Rather not say	1/1/2022 2:14 PM
50	No	1/1/2022 1:27 PM
51	Middle income	1/1/2022 12:50 PM
52	I don't understand this question.	1/1/2022 9:02 AM

Currituck County Coastal Resilience Questionnaire

53	Over taxed	1/1/2022 6:29 AM
54	Keeping head above water with rising living cost	1/1/2022 5:59 AM
55	Above poverty and below middle class	1/1/2022 2:28 AM
56	White	1/1/2022 12:11 AM
57	Middle class	12/31/2021 9:41 PM
58	Why would this matter?	12/31/2021 5:24 PM
59	None of the above	12/31/2021 5:12 PM
60	American	12/31/2021 1:23 PM
61	N/A	12/31/2021 12:59 PM
62	None	12/31/2021 9:00 AM
63	Parents/Ag	12/31/2021 8:19 AM
64	So I can choose who I am and my bias??	12/31/2021 7:20 AM
65	None	12/31/2021 5:13 AM
66	No	12/30/2021 7:21 PM

Q10 In your experience, do environmental issues disproportionately affect the following sectors of the community?

Answered: 741 Skipped: 180



	YES	NO	UNSURE	TOTAL	WEIGHTED AVERAGE
Low-income individuals	42.03% 306	30.77% 224	27.20% 198	728	1.85
Older adults	44.61% 327	28.51% 209	26.88% 197	733	1.82
People with disabilities	45.29% 327	23.96% 173	30.75% 222	722	1.85
People of racial or ethnic minorities	21.96% 157	42.24% 302	35.80% 256	715	2.14

Currituck County Coastal Resilience Questionnaire

#	OTHER (PLEASE SPECIFY)	DATE
1	Everyone	1/11/2022 11:33 AM
2	Our flooding and infrastructure issues affect everyone	1/11/2022 11:21 AM
3	We are all people/humans! Get rid of the racial or ethnic questions. regardless of color/race it affects ALL people....	1/7/2022 10:00 AM
4	none of the above	1/4/2022 1:42 PM
5	retirees	1/3/2022 10:10 AM
6	I see a county employee has been to some 'wokeness' seminars but create this bullshit.	1/2/2022 2:03 PM
7	L	1/1/2022 7:10 PM
8	Middle Age	1/1/2022 3:14 PM
9	It affects everyone	1/1/2022 9:02 AM
10	Need to specify what environmental issue	12/31/2021 6:00 PM
11	I don't know	12/31/2021 9:00 AM
12	Cost of housing for service employees	12/31/2021 1:37 AM

Q11 Which areas are most affected by environmental issues? Include street names, neighborhood names, building names, etc.

Answered: 459 Skipped: 462

#	RESPONSES	DATE
1	Eagle creek	1/21/2022 7:54 AM
2	Outer banks	1/21/2022 7:21 AM
3	The storm water retention pond on Green Lake Road in Moyock lacks capacity to hold runoff from a large storm and causes water to back up into residents yards. The ditch that this pond drains to on Survey road is also full of vegetation which could be contributing to the water back up.	1/21/2022 7:11 AM
4	Near the water both sound side and ocean	1/21/2022 6:33 AM
5	Ranchland	1/21/2022 3:00 AM
6	Wedgewood and Ranchland	1/20/2022 9:27 PM
7	Augusta Dr has drainage issues	1/20/2022 2:14 PM
8	Tulls Creek and Eagle Creek	1/20/2022 1:31 PM
9	Tulls Creek Rd.	1/20/2022 9:55 AM
10	Carova Beach roads	1/20/2022 7:59 AM
11	Moyock, Outer Banks	1/20/2022 5:52 AM
12	Tulls Creek Road area, Walnut Island area	1/20/2022 5:33 AM
13	Tulls Creek road will flood with a heavy rain.	1/20/2022 3:31 AM
14	Carova	1/19/2022 9:13 PM
15	Buckskin Creek	1/19/2022 8:29 PM
16	NA	1/19/2022 8:15 PM
17	Guinea rd	1/19/2022 7:40 PM
18	Vehicles from salt water.	1/19/2022 5:53 PM
19	Ocean Sands, Corolla	1/19/2022 5:25 PM
20	Waterlily road	1/19/2022 3:50 PM
21	Cypress Point II	1/19/2022 2:47 PM
22	Na	1/19/2022 2:24 PM
23	Caratoke Hwy, grandy	1/19/2022 12:23 PM
24	Carova Beach and Swan Beach are both ticking time bombs, with unbridled development likely to threaten water resources and ecosystems that provide resilient services to property owners.	1/19/2022 12:00 PM
25	Mallard Drive 27929 Street floods every time it rains	1/19/2022 8:37 AM
26	Knotts Island causeway	1/19/2022 8:14 AM
27	Mainland shoreline	1/19/2022 7:25 AM
28	Knotts Island Causeway	1/18/2022 7:11 PM
29	Bells island	1/18/2022 6:12 PM
30	Currituck Hwy from state line south to just past Eagle Creek extensive flooding	1/18/2022 5:31 PM

Currituck County Coastal Resilience Questionnaire

31	All of the outerbanks	1/15/2022 7:38 PM
32	Poyners rd	1/14/2022 9:31 AM
33	Tulls creek road as a whole Eagle creek floods and the sewage system needs to be fixed badly	1/14/2022 9:24 AM
34	Side streets, flooding in grandy and aydlett	1/14/2022 7:58 AM
35	Soundside.	1/14/2022 5:17 AM
36	Literally everywhere in Corolla	1/13/2022 11:10 PM
37	Poyners, caratoke Hwy Sligo bridge, eagle creek sewage, beach erosion,	1/13/2022 8:07 PM
38	The bridge and flooding of marsh road and ditches over filling into roads	1/13/2022 5:36 PM
39	Wedgewood Lakes Neighborhood. Parts of Corolla.	1/13/2022 5:34 PM
40	Poyners	1/13/2022 4:55 PM
41	168	1/13/2022 6:40 AM
42	Tulls creek,eagle creek,ranchland	1/13/2022 1:15 AM
43	Tulls creek Road, whalehead, moyock fire department	1/12/2022 11:14 PM
44	You figure it out	1/12/2022 2:26 PM
45	East Gibbs Rd	1/12/2022 2:09 PM
46	Currituck county, your entire drainage plan, transportation, community services(food, gas)	1/12/2022 12:30 PM
47	Whalehead Dr between Perch and Herring St All of Bonito St.	1/12/2022 10:35 AM
48	•Route 12 in Duck flooding •Route 12 near Pine Island flooding	1/12/2022 10:19 AM
49	Waterfront dr neighborhood....The septic system runoff during heavy rains is unacceptable. Raw sewage running directly into the sound killing almost all aquatic life in the surrounding area. About to pics and report to state officials and social media! Take action!!	1/12/2022 7:36 AM
50	Streets non passable.	1/12/2022 1:29 AM
51	Corova beach/dunes	1/11/2022 11:18 PM
52	Don't know	1/11/2022 7:47 PM
53	Indian town,Tulls Creek Road	1/11/2022 7:23 PM
54	Bells Island Rd causeway West Canvasback	1/11/2022 7:11 PM
55	Water front	1/11/2022 5:59 PM
56	168	1/11/2022 5:49 PM
57	I don't know.	1/11/2022 3:54 PM
58	Aydlett Rd just before Lighthouse View, dune is eroding significantly close to roadway. Where Aydlett Rd and Poplar Branch Rd meet at the fork. Drainage issue.	1/11/2022 1:01 PM
59	Poyners rd hey 168	1/11/2022 11:37 AM
60	Beechwood shores	1/11/2022 11:21 AM
61	Unsure but most areas along the water.	1/11/2022 9:15 AM
62	I believe in our area the environmental issues are more related to digging sand pits/mines.. All Over Currituck County.. Not just one place but many places.. it affects all animals, environments, communities & neighborhoods, where ever they are allowed to put them!	1/10/2022 11:48 PM
63	Beach road and beach front property	1/10/2022 8:28 PM
64	Neighborhoods in Grandy on the east side of HWY 158	1/10/2022 8:13 PM
65	Walnut Island and surrounding areas	1/10/2022 6:49 PM
66	158 hwy	1/10/2022 5:51 PM

Currituck County Coastal Resilience Questionnaire

67	Old Tulls Creek road floods often. Drainage needs to be fixed	1/10/2022 4:41 PM
68	Carova and maple rd	1/10/2022 1:55 PM
69	Food lion	1/10/2022 11:25 AM
70	Corolla beach areas	1/10/2022 10:00 AM
71	Newberns Landing in Powells Point	1/10/2022 8:58 AM
72	Water on highways, poor drainage	1/10/2022 4:23 AM
73	Snowden area	1/9/2022 10:10 PM
74	All of the new subdivisions	1/9/2022 8:23 PM
75	Tulls Bay, Poyner's Rd.	1/9/2022 7:39 PM
76	Moyock schools. Areas off puddin ridge	1/9/2022 7:30 PM
77	Tulls creek	1/9/2022 7:19 PM
78	Quail run. Old tulls creek rd.	1/9/2022 6:22 PM
79	Tulls Creek Road, Kilmarlic Neighborhood	1/9/2022 6:01 PM
80	None that I'm aware of.	1/9/2022 1:56 PM
81	Hwy 12 north of Corolla	1/9/2022 12:39 PM
82	Corolla, Tulls Creek, Carova	1/9/2022 9:43 AM
83	Ocean Sands	1/9/2022 9:36 AM
84	All of Moyock.	1/9/2022 8:00 AM
85	Guinea rd,Gables housing development	1/9/2022 6:52 AM
86	Lighthouse drive corolla	1/9/2022 5:02 AM
87	Walnut Island	1/8/2022 10:30 PM
88	All roads on the 4X4.	1/8/2022 9:12 PM
89	Unsure	1/8/2022 9:08 PM
90	Our "main" drainage ditches are in need of attention in the Southern en at Jarvisburg - in our neighborhood of S Bayview & Jarvisburg Rd	1/8/2022 8:54 PM
91	Tulls Creek	1/8/2022 8:20 PM
92	Tulls Creek Road	1/8/2022 8:09 PM
93	All the new developments in Moyock. The BMP ponds are a joke. They need to be much larger and rated for much heavier rain events.	1/8/2022 8:07 PM
94	Not sure	1/8/2022 6:23 PM
95	Marsh causeway knotts island	1/8/2022 6:12 PM
96	Waterlily Road needs widened with better shoulders to better deal with flooding and downed trees due to winds	1/8/2022 5:49 PM
97	Walnut island	1/8/2022 2:09 PM
98	Tulls Creek. Shingle Landing Rd.	1/8/2022 1:46 PM
99	Town of Duck, whalehead club	1/8/2022 9:44 AM
100	All of Currituck County	1/8/2022 9:36 AM
101	Unsure	1/8/2022 7:52 AM
102	Bells island, Moyock, all low areas	1/8/2022 6:51 AM
103	Eagle Creek...flooding and drainage issues persist. Sewage treatment plant is sub-par as is drainage when we have heavy rains	1/7/2022 7:40 PM

Currituck County Coastal Resilience Questionnaire

104	East Ridge Rd., Buckskin neighborhood, Tulls Creek Rd., Poyner Rd.	1/7/2022 7:38 PM
105	Short cut rd.	1/7/2022 6:34 PM
106	Tulls Bay	1/7/2022 6:25 PM
107	Eagle Creek, Quail Run, newer development on Shingle Landing Road is causing flooding issues for older residents on larger lots	1/7/2022 5:04 PM
108	E ridge rd, Tulls creek road near the bridge, poyners rd	1/7/2022 4:10 PM
109	Old Tulls creek road,Moyock. IN TULLS BAY COLONY.	1/7/2022 3:46 PM
110	Villages of Ocean Hill beach/dunes erosion.	1/7/2022 2:53 PM
111	Whalehead Beach, Ocean Sands, Pine Island, Ocean Hill	1/7/2022 2:28 PM
112	Tull creek roads is in terrible shape with potholes and poorly attempt to patch the potholes. The roads needs to be resurfaced.	1/7/2022 10:02 AM
113	Corolla, Walnut Island, Poyners Rd	1/7/2022 7:35 AM
114	Some flooding during storms. Shingle Landing Rd and Camellia Drive t and around the bridge over creek there	1/7/2022 7:25 AM
115	Tulls Creek Road, Poyners Road, seriously floods	1/6/2022 10:25 PM
116	corolla	1/6/2022 8:21 PM
117	Beach roads and rt 12	1/6/2022 6:52 PM
118	Wedgewood Lakes	1/6/2022 6:10 PM
119	NC Route 12	1/6/2022 5:44 PM
120	Guinea Road, Moyock Library parking lot, areas of Tulls Creek Road - all subject to flooding	1/6/2022 4:49 PM
121	4x4 area	1/6/2022 4:47 PM
122	Knotts Island, Gibbs woods, eagle creek, north end of Snowden rd, guniea rd, poyners rd, east ridge rd	1/6/2022 1:22 PM
123	Not sure	1/6/2022 12:33 PM
124	Waterlily, Walnut Island	1/6/2022 10:00 AM
125	corova, ocean sands, highway 12	1/6/2022 8:17 AM
126	All roads on Knotts Island need repaving. ALIL ditches & culverts on KI need to be cleaned out. Hasn't been done in YEARS and I for one am sick of DOT excuses as to why it can't be done.	1/6/2022 6:47 AM
127	There is literal poop in eagle Creek. We keep building all these neighborhoods and we have no foresight on how it's going to affect the area around us.	1/5/2022 11:37 PM
128	Moyock	1/5/2022 9:33 PM
129	Walnut Island	1/5/2022 9:18 PM
130	Corolla	1/5/2022 8:34 PM
131	Ocean sands, Corolla	1/5/2022 6:59 PM
132	Old Moyock along Puddin Ridge Rd, anywhere near waterways or major drainage canals in or near north end of Moyock township, Eagle Creek, Quail Run.	1/5/2022 6:39 PM
133	Ocean Sands (HIJO) Corolla	1/5/2022 4:30 PM
134	Rural areas on mainland	1/5/2022 3:32 PM
135	Minor flooding on Par Four Drive in Grandy after major storms/prolonged periods of rain.	1/5/2022 3:21 PM
136	Moyock, Tulls Creek, Shawboro/Sligo, Bells Island Rd	1/5/2022 1:29 PM
137	We need the bridge to Corolla to happen.	1/5/2022 1:10 PM
138	Walnut island	1/5/2022 11:32 AM

Currituck County Coastal Resilience Questionnaire

139	Tulls Creek Rd flooding and road destruction. Guinea Rd flooding	1/5/2022 10:53 AM
140	Moyock	1/5/2022 10:39 AM
141	Tulls creek Bridge Bridge near Moyock Elementary School	1/5/2022 10:19 AM
142	Tulls Creek Rd, New Guinea Rd, Poyners Rd, East Ridge Rd.	1/5/2022 9:10 AM
143	Wedgewood lakes	1/4/2022 11:21 PM
144	There are multiple neighborhoods that suffer flooding during storms-launch landing, RiversEdge, Tull Bay and many more	1/4/2022 9:45 PM
145	Tulls Creek Road east of Tull Bay Colony	1/4/2022 9:32 PM
146	Shawboro's low lying streets such as Eastridge road. Aydlett Road flooding,	1/4/2022 9:27 PM
147	Highway 12 between Duck and Corolla	1/4/2022 7:42 PM
148	Bells Island	1/4/2022 7:28 PM
149	4 x 4 area roads flood all the time	1/4/2022 7:25 PM
150	Old Tulls creek road	1/4/2022 6:46 PM
151	Marsh Causeway Southend Rd behind the KI Market and Closer down toward the ferry near Whiteneck Rd	1/4/2022 5:38 PM
152	Old Tulls creek, east Gibbs, Tulls creek bridge	1/4/2022 3:12 PM
153	Low lying areas because of improper drainage maintaining	1/4/2022 1:45 PM
154	creek dr moyock	1/4/2022 1:43 PM
155	Unsure of specific locations or buildings	1/4/2022 12:22 PM
156	Aydlett water front Narrow Shores Road area	1/4/2022 11:42 AM
157	Ranchland subdivision and surrounding areas	1/4/2022 11:38 AM
158	Moyock	1/4/2022 10:53 AM
159	Beechwood shores	1/4/2022 10:34 AM
160	Most of Currituck	1/4/2022 9:36 AM
161	All neighborhoods experience different issues. Wind damage in pine island this summer from that tornado that you won't call a tornado(I watched it so it was obvious) Or the flooding issues in ocean sands. Some sections are under water for weeks after heavy rain and storms. And the beach is getting smaller and smaller. In all of Corolla	1/4/2022 9:35 AM
162	The public waste facilities (dump) scattered throughout the County. Drainage from the garbage flows onto the ground and into the public soil and land and I'm sure eventually it seeps into groundwater	1/4/2022 8:55 AM
163	Ocean Sands HIJO	1/4/2022 8:36 AM
164	Summer woods road, Waterlilly road, Grandy road(in the curve past Nathan drive), Mallard drive walnut Island	1/4/2022 7:05 AM
165	PB 87-56 Monteray Shores, Phase 10 Malia Drive Corolla	1/4/2022 1:32 AM
166	Bay Colony	1/3/2022 9:50 PM
167	Moyock is going to be a problem with all the growth. Getting to Corolla is a nightmare due to traveling through Duck.	1/3/2022 9:00 PM
168	Outer banks, inner outer banks (I.e. Knotts Island)	1/3/2022 7:26 PM
169	Knotts Island Marsh Causeway	1/3/2022 7:13 PM
170	Carova	1/3/2022 6:07 PM
171	Sandfiddler Rd, Ocean Pearl	1/3/2022 5:58 PM
172	Moyock, Grandy, and Barco	1/3/2022 4:40 PM

Currituck County Coastal Resilience Questionnaire

173	Ocean Sands communities storm drainage issues or lack there of.	1/3/2022 4:03 PM
174	Ocean Sands area	1/3/2022 3:56 PM
175	all but by differing factors	1/3/2022 3:29 PM
176	Flooding issues in Ocean Sands and Crown Point in Corolla. Specifically Sea Mist Way and Sea Mist Court.	1/3/2022 2:50 PM
177	Grandy mold around all properties	1/3/2022 2:27 PM
178	Pine Island area, the Narrows marshes, Eagle Creek, Waterlily, Carova roads	1/3/2022 2:25 PM
179	Waterlily Road	1/3/2022 2:22 PM
180	All of Corolla and Carova is experiencing beach erosion. In another two to three years, there will be no beach. Then no tourists and no tax revenues unless preparation gets started in 2022 for beach nourishment/replenishing. No one wants to visit a beach town and not have a beach to sit on.	1/3/2022 2:18 PM
181	Currituck club	1/3/2022 2:14 PM
182	Sandfiddler rd 22 block	1/3/2022 2:03 PM
183	Sea Loft Village Ocean Sands Section F	1/3/2022 1:25 PM
184	Ocean Sands, Section O, Corolla, NC	1/3/2022 12:49 PM
185	Outer Banks and inland areas with poorly planned drainage	1/3/2022 12:18 PM
186	My family that live with a poorly built solar farm in their backyard in Grandy - Grandy Rd adjacent to the Carolina Club Flooding in Whalehead and just south of the Pine Island Reserve - it affects my business and the ability for us to do our job	1/3/2022 11:53 AM
187	Ocean Sands in particular because of a serious groundwater problem. Those who live around the lake in ocean sands have an additional problem of lake overflow.	1/3/2022 11:51 AM
188	Tulls Bay Colony, Tulls Creek Road, Poyner's Road	1/3/2022 11:38 AM
189	Areas between 158 and Camden county line Also between airport and route 34	1/3/2022 11:09 AM
190	Tulls creek, Backwoods, Caratoke hwy, Eagle Creek	1/3/2022 10:51 AM
191	Ocean Sands Flooding	1/3/2022 10:47 AM
192	Currituck County's own engineering survey show most oceanfront homes in Corolla face devastation of their oceanside infrastructure - walkways/ pools' decking by next hurricane with 35 identified by the engineers as having a likelihood of having their foundations undermined. See SaveOurBeach.net	1/3/2022 10:12 AM
193	Ocean Sands Corolla all of it	1/3/2022 9:50 AM
194	Ocean Sands in Corolla	1/3/2022 9:47 AM
195	Waterlily floods but only in certain circumstances. The highways through lower currituck are unsafe though due to paved conditions being torn up.	1/3/2022 9:46 AM
196	Flooding on Rt. 12.	1/3/2022 9:00 AM
197	Route 12 North	1/3/2022 8:08 AM
198	Corolla Ocean Sands - flooding	1/3/2022 7:47 AM
199	Tulls bay	1/3/2022 7:32 AM
200	Moyock tulls creek road	1/3/2022 7:21 AM
201	Route 12 flooding - several locations (Hampton inn, ocean sands), major beach erosion - buck island, crown point, ocean sands	1/3/2022 7:12 AM
202	Cormorant trail and areas near lake	1/3/2022 12:29 AM
203	Guinea Rd, Tulls Creek Rd, Quail Run, Waterlily, Walnut Island	1/3/2022 12:13 AM
204	All areas close to the Intra Coastal Waterway and Sounds	1/2/2022 11:25 PM
205	Ocean sands, cross streets in whalehead, all the roads in North Beach (Swan Carova etc)	1/2/2022 11:10 PM

Currituck County Coastal Resilience Questionnaire

206	Ocean Sands	1/2/2022 11:05 PM
207	Whalehead- significant street flooding due to poor drainage after storms Villages at Ocean Hill- significant beach erosion and loss of dune stability leading to waterline encroachment on homes	1/2/2022 11:01 PM
208	Ocean pearl and sandfiddler	1/2/2022 10:46 PM
209	Ocean Sands in Corolla	1/2/2022 10:40 PM
210	Summit Farms, Quail Run	1/2/2022 9:40 PM
211	Ocean Sands, all of the Swan Beach/Carova areas, rt 12 in front of the Hampton Inn	1/2/2022 9:35 PM
212	Pine Island, Ocean Sands, Crown Point, Whalehead, Corolla Light, Corolla Village, Ocean Hill 1, Villages at Ocean Hill	1/2/2022 9:25 PM
213	rt 12 homes	1/2/2022 9:12 PM
214	Quail Run floods. There are many other areas that flood horribly with minimal rain. The County knows where these areas are.	1/2/2022 9:08 PM
215	Waters Edge / Ocean Sands Section M	1/2/2022 9:08 PM
216	Ocean Sands	1/2/2022 9:07 PM
217	Island portion of the county	1/2/2022 9:03 PM
218	Currituck mainland and sound side communities, ocean sands in beach community	1/2/2022 8:58 PM
219	Ocean Sands - Wave Arch flooding & drainage issues	1/2/2022 8:57 PM
220	Bells Island	1/2/2022 8:39 PM
221	Ocean Sands floods horribly	1/2/2022 8:36 PM
222	745 Starfish Court Corolla, NC Section N Ocean Sands	1/2/2022 8:35 PM
223	Ocean sands , corolla - NC	1/2/2022 8:24 PM
224	Rt 12 in Pine Island area. Frequently HCD as standing water. Entrance to Harris Teete. Standing water at stop light entrance and egress by Harris Teeter	1/2/2022 8:24 PM
225	Ocean Sands D, Porpoise Point at North end in the cul du sac in front of dune cross over. The edges of the entire cul du sac flood routinely after minor rain and the entire cul du sac floods after moderate rain. It needs better drainage.	1/2/2022 8:14 PM
226	Derby drive (in Saddlebrook neighborhood, off south mills rd) washes over and floods severely with rain storms and has opened up several times with a sink hole because of this drainage problem. It does not drain quickly enough to the pond, which causes severe backup for hours and erosion off of derby drive.	1/2/2022 8:13 PM
227	Dunes	1/2/2022 8:08 PM
228	Coastal homes, infrastructure	1/2/2022 7:51 PM
229	Ocean sands	1/2/2022 7:45 PM
230	Ocean sands Section H	1/2/2022 7:20 PM
231	Flooding in Corolla--Crown Point/Ocean Sands. We are in Buck Island but had houses in Crown Point in the past 20 years and noted minimal flooding change to become more frequent. Buck Island seems better.	1/2/2022 7:02 PM
232	Ocean Sands neighborhoods in Corolla	1/2/2022 6:54 PM
233	Ocean sands	1/2/2022 6:46 PM
234	Ranchland	1/2/2022 6:39 PM
235	Ocean Sands and Whalehead neighborhoods	1/2/2022 6:29 PM
236	OBX	1/2/2022 6:17 PM
237	Ocean Sands, Crown Point.	1/2/2022 6:02 PM

Currituck County Coastal Resilience Questionnaire

238	Ocean sands	1/2/2022 6:00 PM
239	Lighthouse Drive in Corolla	1/2/2022 5:56 PM
240	OBX	1/2/2022 5:55 PM
241	Ocean Sands is a mess even in a minor storm. I won't buy a home there. The beach accesses hold much water that gets deep. Makes it very hard to use the public beach accesses like Bonito even days after storms. Currituck Club has flooding and I won't consider a different home in much of the community because of it. My house is near 12 and not the sound or ocean. I don't have views but I don't have a flooding concern either.	1/2/2022 5:54 PM
242	Corolla	1/2/2022 5:34 PM
243	Ocean sands; Section KLMN	1/2/2022 5:32 PM
244	Carova	1/2/2022 5:20 PM
245	Rt 12 flooding, driftwood way flooding, sea mist lane flooding, most of Ocean Sands north.	1/2/2022 5:15 PM
246	Whalehead	1/2/2022 5:14 PM
247	Ocean Sands North	1/2/2022 5:14 PM
248	Seabird way neighborhood, all of north beach, dunes in southern Corolla	1/2/2022 5:04 PM
249	Don't know	1/2/2022 5:03 PM
250	Ocean Sands neighborhood, Ocean Hill neighborhood - lots of flooding and standing water. Beach erosion north end of Corolla!	1/2/2022 4:48 PM
251	Whole county	1/2/2022 4:47 PM
252	Ocean Sands	1/2/2022 4:47 PM
253	Not sure.	1/2/2022 4:34 PM
254	Ocean sands HIJO My property floods several times a year, the lot an actual swamp under several inches of water.	1/2/2022 4:29 PM
255	Ocean Sands	1/2/2022 4:17 PM
256	Corolla. Ocean Sands subdivision; Route 12	1/2/2022 4:16 PM
257	Highway 1	1/2/2022 4:06 PM
258	Ocean Sands Section F, Sealoft Village II, Sand Fiddler Circle	1/2/2022 3:34 PM
259	Corolla beaches	1/2/2022 3:10 PM
260	Hwy 12 floods badly starting at the fore station and south. I live in that area so I'm not sure about north of me.	1/2/2022 3:01 PM
261	Lighthouse drive	1/2/2022 2:31 PM
262	Whaledhead and ocean sands	1/2/2022 2:30 PM
263	All of Corolla/Carova.....	1/2/2022 2:25 PM
264	Flooding in front of pine island and in ocean sands d	1/2/2022 2:21 PM
265	Certain sections of Rte 12 in Corolla	1/2/2022 2:04 PM
266	Obv overbuilding along the coast and sound will affect all of us. ESP traffic and people who feel unrestricted access to everything.	1/2/2022 2:03 PM
267	4x4	1/2/2022 2:03 PM
268	Ocean Sands , Buck Island , Whalehead, Corolla Light	1/2/2022 2:00 PM
269	Ocean Sands	1/2/2022 1:59 PM
270	Ocean sands	1/2/2022 1:39 PM
271	Ocean front	1/2/2022 1:22 PM
272	Any areas where the primary drainage of a community are located on private land and is not	1/2/2022 1:21 PM

Currituck County Coastal Resilience Questionnaire

	being maintained.	
273	Ocean sands	1/2/2022 1:08 PM
274	All of Corolla areas	1/2/2022 1:02 PM
275	Most all areas around Whalehead subdivision have flooding issues. Rt 12 from Currituck county line till it ends needs repair before the bridge is finalized	1/2/2022 1:02 PM
276	N Harbor Vw	1/2/2022 12:55 PM
277	Soundside community and HIJO	1/2/2022 12:54 PM
278	Mariner Dr., section P, Ocean Sands	1/2/2022 12:51 PM
279	Sectional L Intersection of Sunset Blvd, Route 12 Tim Buck II shopping center	1/2/2022 12:46 PM
280	Rt12 north.	1/2/2022 12:45 PM
281	Corolla, crown point, ocean sands,	1/2/2022 12:43 PM
282	Carova, 1550-1600 swan beach, food lion moyock area, nee subdivisions	1/2/2022 12:42 PM
283	All of Currituck OBX	1/2/2022 12:42 PM
284	Ocean sands has horrendous flooding as a result of topography resulting from recent construction of the surrounding areas. It takes merely a light storm to cause consequential flooding in section F for example and roadways flood easily.	1/2/2022 12:41 PM
285	Corolla ocean front. FUND beach nourishment like every single town in Dare County. No Corolla, no county income.	1/2/2022 12:37 PM
286	Highway 12, the stretch of road between Ace hardware & corolla light sports center. Always heavily floods.	1/2/2022 12:36 PM
287	Beach and sound side erosion	1/2/2022 12:30 PM
288	All areas of Ocean Sands around the lake	1/2/2022 12:30 PM
289	Water treatment plant on Mila drive recent causes for algae blooms in near by pond and potentially from septic failure Intersection at dolphin. And Monterey drive and rt 12 are very dangerous and I propose a light.	1/2/2022 12:18 PM
290	Ocean zands	1/2/2022 12:17 PM
291	Sandfiddler between milepost 21 and 23	1/2/2022 12:16 PM
292	Ocean Sands, Whalehead -flooding All OBX beaches - erosion/storm damage	1/2/2022 12:16 PM
293	Ocean sands	1/2/2022 12:12 PM
294	Ocean Sands	1/2/2022 12:09 PM
295	4x4 roads, KI causeway	1/2/2022 12:00 PM
296	Whalehead Community, Ocean Hill Community, Villages of Ocean Hill Community, All homes in Carova	1/2/2022 12:00 PM
297	Ocean Sands Section K,L,M. Highway 12 in front of Hampton Inn.	1/2/2022 11:54 AM
298	Water Lily, bells Island, Tull's Creek quail run guinea road	1/2/2022 11:52 AM
299	Carova	1/2/2022 11:47 AM
300	Outer Banks	1/2/2022 11:45 AM
301	I don't understand the question. What environmental issues? Restrictions on improvements based on environmental issues? BUILD THE BRIDGE.	1/2/2022 11:44 AM
302	Whalehead at Bonito St. , Rt. 12 north of Pine Island	1/2/2022 11:40 AM
303	Ocean Sands	1/2/2022 11:30 AM
304	Ocean Sands, Section K, Corolla	1/2/2022 11:23 AM
305	Ocean Sands in Corolla	1/2/2022 11:19 AM

Currituck County Coastal Resilience Questionnaire

306	Ocean Sands, Corolla, Sections K,L,M,N,P	1/2/2022 11:18 AM
307	The entire barrier island is in danger without county support and protection. To many septic tanks and wells located in close proximity. Canals are grass filled. Horses are in danger. Currituck needs to spend our tax money on helping the locals.	1/2/2022 11:10 AM
308	Ocean sands neighborhood	1/2/2022 11:08 AM
309	Allowing too much development of 4x4.	1/2/2022 10:54 AM
310	Outer Banks	1/2/2022 8:50 AM
311	LOW LYING NEIGHBERHOODS	1/2/2022 7:46 AM
312	Flooding on east side of Villages of Ocean Hill	1/2/2022 7:43 AM
313	Simpson Road	1/2/2022 7:20 AM
314	Corolla	1/2/2022 7:02 AM
315	Cypress point, Kilmarlic,	1/2/2022 6:37 AM
316	Lighthouse ramp	1/2/2022 4:36 AM
317	Any shoreline, depends on where storm hits. We choose to live here, and dealing with storms is part of it	1/2/2022 3:31 AM
318	Lower currituck	1/2/2022 12:55 AM
319	Carova Beach	1/1/2022 11:30 PM
320	Ditch drainage in Shawboro	1/1/2022 10:12 PM
321	Eagle creek	1/1/2022 10:01 PM
322	Na	1/1/2022 9:11 PM
323	Not sure	1/1/2022 8:50 PM
324	Summit Farms Moyock	1/1/2022 8:42 PM
325	Simpson Rd/Ln	1/1/2022 8:32 PM
326	all of the sand roads in the 4x4 communities swan north swan and carova	1/1/2022 8:30 PM
327	Ocean Sands	1/1/2022 7:23 PM
328	Corolla beach is disappearing. Beach replenishment is urgently needed!	1/1/2022 7:12 PM
329	Waterlily Rd Bells Island Rd Tulls Creek Rd	1/1/2022 6:58 PM
330	All county impacted by sea level rise	1/1/2022 6:39 PM
331	4x4 area	1/1/2022 6:36 PM
332	Knotts Island Causeway, Currituck Ferry, Carova Beach (Beach strand and road behind the dune)	1/1/2022 6:20 PM
333	Moyock any of the older existing subdivision.	1/1/2022 6:16 PM
334	Rte 12, some low lying areas of Corolla, areas where dunes have been abused by homeowners/tenants	1/1/2022 5:37 PM
335	Parting gull mile post 1659 on beach strand	1/1/2022 5:23 PM
336	ocean pearl, access over the dunes following winds over 50 mph, swan beach access following more than an inch of rain, the counties constant reactivity instead of pro activity to help the drainage issue	1/1/2022 5:20 PM
337	Moyock corolla	1/1/2022 4:35 PM
338	All the roads in Seagull and Swan beaches.	1/1/2022 3:38 PM
339	Guinea Rd and other low lying areas along 168 that flood	1/1/2022 2:15 PM
340	Sound water issues and receding beaches in Corolla	1/1/2022 2:11 PM
341	Offroad	1/1/2022 2:07 PM

Currituck County Coastal Resilience Questionnaire

342	Swan Beach	1/1/2022 2:06 PM
343	Oceanfront	1/1/2022 1:28 PM
344	Beechwood shores drive	1/1/2022 1:01 PM
345	Tulls creek rd	1/1/2022 12:51 PM
346	N/a	1/1/2022 12:04 PM
347	Woodleigh Road, Marsh Road and Knotts Island Road, Knotts Island	1/1/2022 12:00 PM
348	Not sure	1/1/2022 11:56 AM
349	Areas with no sewer system.	1/1/2022 11:50 AM
350	Drainage ditches at cul de sacs	1/1/2022 11:35 AM
351	Whalehead beach street flooding	1/1/2022 11:25 AM
352	2314 ocean pearl rd	1/1/2022 11:15 AM
353	Rodanthee, Carova, Avon, Colington Harbour	1/1/2022 11:14 AM
354	Ranchland.	1/1/2022 11:01 AM
355	Trailer courts like Carolina village, Ponderosa and the one on Tulls Creek Rd.	1/1/2022 10:38 AM
356	Corolla	1/1/2022 10:28 AM
357	Carova	1/1/2022 10:25 AM
358	Coastal	1/1/2022 10:14 AM
359	Unsure	1/1/2022 9:51 AM
360	Coastal Currituck, soundside properties	1/1/2022 9:37 AM
361	4x4 beaches	1/1/2022 9:11 AM
362	4x4 Carova	1/1/2022 8:55 AM
363	Moyock, due to the constant new construction.	1/1/2022 8:48 AM
364	Property flooding in between Barco and Sligo area on main highway	1/1/2022 8:46 AM
365	Swan beach	1/1/2022 8:31 AM
366	Carova	1/1/2022 8:20 AM
367	Currituck County with all the construction and tree and plant life removal it has a negative effect on the environment in it's entirety.	1/1/2022 8:18 AM
368	Moyock and Corolla	1/1/2022 8:11 AM
369	Walnut island	1/1/2022 8:09 AM
370	.	1/1/2022 8:06 AM
371	Beach area	1/1/2022 6:30 AM
372	Sandfiddler, sandpiper, ocean pearl, this area can not handle the amount of increasing vehicular traffic (ie day trippers and vacationers) that is coming to the 4x4. We have seen numerous septic tanks that have been exposed from washouts in the roads many broken power lines due to traffic eroding the sand roads. Trying to keep a land line working is almost unrealistic for internet the lines are constantly being cut due to the traffic. That is only the beginning. The dunes are not being protected in any way. They are being broken don by foot traffic trying to get a picture of the horses. This is our only defense against a major storm and it is being driven on by out of town guests and trampled for a simple picture. Yes there is a drainage issue but brings no any more new construction with those impermeable surfaces is the largest factor. The well water quality has started to deteriorate on the 4x4 quite rapidly. The ability to provide water to these houses without bacteria, discoloration from iron or tannin, the smell of sulphide gas, or the deeded arsenic (of which we are finding more of). Is becoming a very tough job indeed.	1/1/2022 6:14 AM
373	Knotts island	1/1/2022 5:37 AM

Currituck County Coastal Resilience Questionnaire

374	Ranchland-flooding, Guinea Rd - flooding. Moyock by food lion flooding	1/1/2022 3:09 AM
375	Ranchland. Bison Drive gets 6 to 18 inches across street when rains. Our water table is raising from new development.	1/1/2022 2:31 AM
376	Bells Island Road	1/1/2022 1:13 AM
377	Carova beach strand. MP 13-24	1/1/2022 12:33 AM
378	Carova Beach and roads	1/1/2022 12:32 AM
379	4WD Beach behind Sandfiddler Road	1/1/2022 12:20 AM
380	Beechwood Shore Sleepy Hollow	1/1/2022 12:12 AM
381	Carova - sandfiddler flooding, impassable beach by laughing gull	12/31/2021 10:40 PM
382	Marshes and shorelines	12/31/2021 10:01 PM
383	Sand roads on the beach causeway headed to knotts island some roads coming onto knotts island just past sandy point	12/31/2021 9:43 PM
384	Dump Rd., Beach strand near Laughing Gull, 2100-2200 Ocean Pearl Rd	12/31/2021 9:34 PM
385	Carova, Eagle Creek, Ranchland	12/31/2021 9:30 PM
386	Fruitville township outer banks	12/31/2021 9:17 PM
387	Eagle creek	12/31/2021 9:12 PM
388	Tulls Creek and Poyners Rd	12/31/2021 8:51 PM
389	All streets with deep puddles in Carova, N Swan & Swan.	12/31/2021 8:34 PM
390	Ocean and sound front homeowners	12/31/2021 8:28 PM
391	Ocean Sands section f has major drainage issues	12/31/2021 8:22 PM
392	Carova	12/31/2021 8:15 PM
393	Sandfiddler, Ocean Pearl and all interior roads	12/31/2021 8:08 PM
394	Older neighborhoods flooding caused by newer neighborhoods	12/31/2021 7:23 PM
395	None	12/31/2021 5:24 PM
396	Moyock	12/31/2021 3:53 PM
397	Bells Island	12/31/2021 3:43 PM
398	Crown Point Ocean Sands	12/31/2021 3:06 PM
399	Not sure what you mean by "environmental issues". Storms?	12/31/2021 2:45 PM
400	.	12/31/2021 2:35 PM
401	Drainage canals through my land are not properly maintained. Increased development has caused greater waters to flow through them	12/31/2021 2:05 PM
402	Corova	12/31/2021 2:05 PM
403	Corolla and North Beaches	12/31/2021 1:49 PM
404	It depends on which environmental issues we're talking about. The entire coastline is at risk due to sea level rise, as are un-bulkheaded properties along the sound.	12/31/2021 1:42 PM
405	Unknown	12/31/2021 12:59 PM
406	Corolla	12/31/2021 12:53 PM
407	Currituck Outer Banks, specifically Hwy. 12 near Hampton Inn and Ocean Sands	12/31/2021 12:53 PM
408	Rita street, Jarvisburg	12/31/2021 12:52 PM
409	Bells Island, Carova, Corolla	12/31/2021 12:43 PM
410	Eaglecreek	12/31/2021 12:11 PM

Currituck County Coastal Resilience Questionnaire

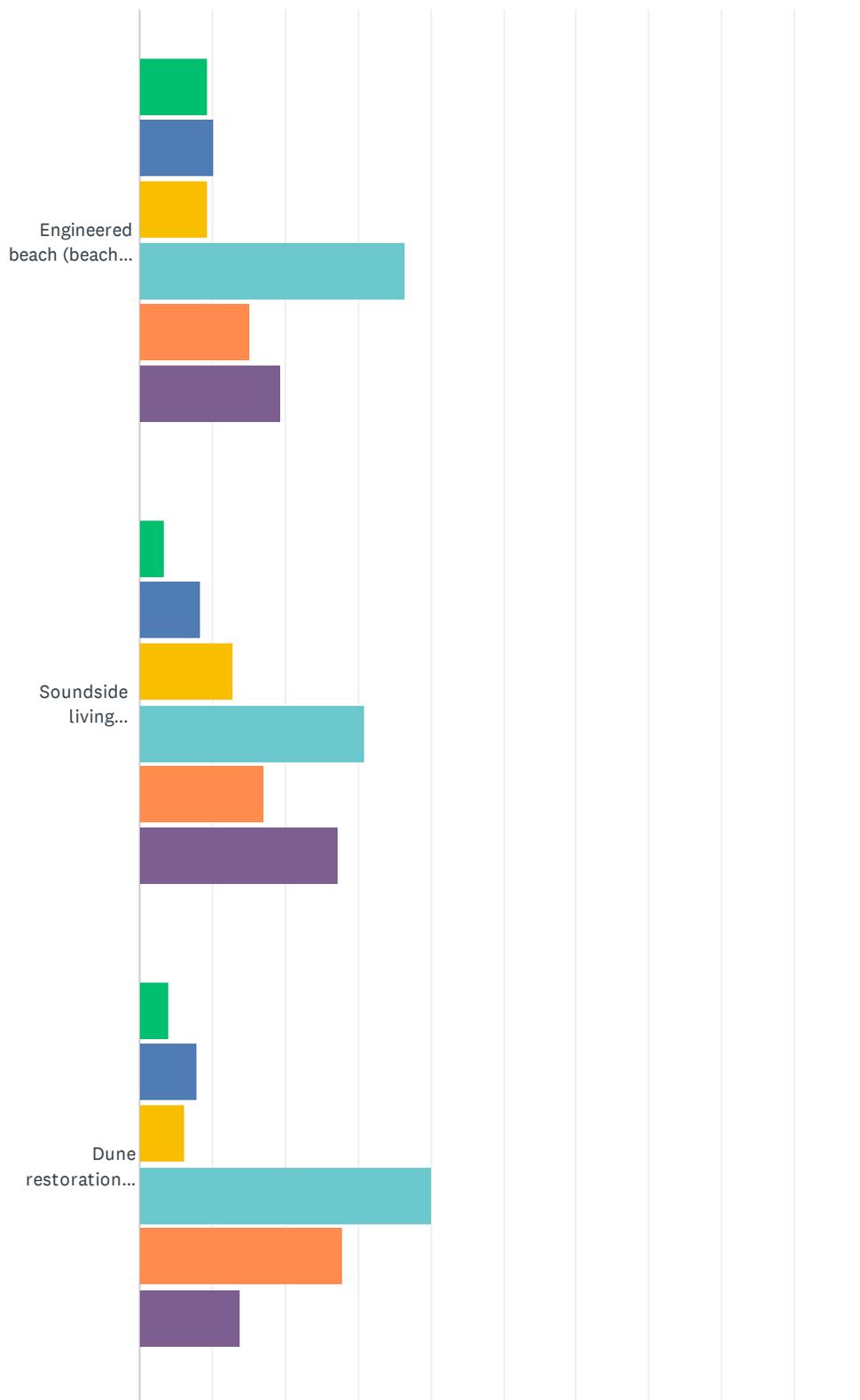
411	East ridge road - flooding poor ditch maintenance.	12/31/2021 12:00 PM
412	All	12/31/2021 9:46 AM
413	Wedgewood lakes	12/31/2021 9:34 AM
414	Guinea road	12/31/2021 9:03 AM
415	Carola	12/31/2021 9:01 AM
416	Rich people areas who can afford waterfront.	12/31/2021 8:44 AM
417	Sligo, nc	12/31/2021 8:39 AM
418	Walnut Island	12/31/2021 8:24 AM
419	Flooding south end Knotts Island Septic issues south end Knotts island Road erosion 4x4 area Carova with inadequate maintenance Trash on sides of roads all over Currituck Trash at Knotts Island bridge Pollution of canals at Carova Water quality in Currituck Sound due to runoff	12/31/2021 8:23 AM
420	.	12/31/2021 8:16 AM
421	Ocean Hill experiences significant flooding after every major rainstorm. The dune line also has significant deterioration along the Ocean Hill subdivision. Unfortunately, the dunes are the responsibility of the homeowners. Some owners do their part in maintains the dunes, others, not at all. Dune management in Currituck County should be the responsibility of the Currituck County Government. Tax monies generated from the rental housing market should be used for this purpose, instead of being wasted on pet projects on the mainland.	12/31/2021 8:07 AM
422	Bonita in whalehead. Flooding and road damage	12/31/2021 7:51 AM
423	4x4. Too much traffic and overcrowded beaches in summer	12/31/2021 7:49 AM
424	All of Moyock	12/31/2021 7:49 AM
425	Lighthouse Drive floods due to houses built higher than the road	12/31/2021 7:45 AM
426	It is crazy to have a study that is this biased. I tried to answer the question that said pick up to three and it rejected my answer until I picked two more whether I wanted to or not.	12/31/2021 7:23 AM
427	Maple rd South side	12/31/2021 7:00 AM
428	Quail Run subdivision Knotts Island	12/31/2021 5:14 AM
429	A lot of Moyock area because of soil (originally was a swamp). Tulls Bay Colony, Beach Wood Shoes, Ranch Land, Summit Farms, Ranchland, some of Guinea Road. Hey 168 between Sligo and Currituck because of alligator weed (Invasive) . Alot of Corova beach streets that flood during minor rainfall	12/31/2021 4:27 AM
430	Moyock	12/31/2021 3:53 AM
431	Flooding on Tulls Creek road.	12/31/2021 1:12 AM
432	Monteray Shores flooding areas of yards and streets	12/31/2021 12:49 AM
433	Corolla Beach erosion	12/31/2021 12:37 AM
434	Tulls Creek Road	12/31/2021 12:32 AM
435	Eagle Creek and their sewage system.	12/31/2021 12:25 AM
436	The entire beach is eroding and there is too much population	12/30/2021 11:03 PM
437	Unsure.	12/30/2021 11:02 PM
438	Pinewood Acres Dr	12/30/2021 10:54 PM
439	The roads need work and the mid Currituck bridge needs built	12/30/2021 10:42 PM
440	NA	12/30/2021 10:36 PM
441	Old Tulls Creek Road, East Ridge Road, Tulls Creek Road, Poyner's Road, Guinea Road	12/30/2021 10:07 PM
442	Beechwood shores	12/30/2021 9:53 PM
443	tulls creek road, poyner road, guinea road, street where moyock elementary school sits- shingle landing maybe?	12/30/2021 9:37 PM

Currituck County Coastal Resilience Questionnaire

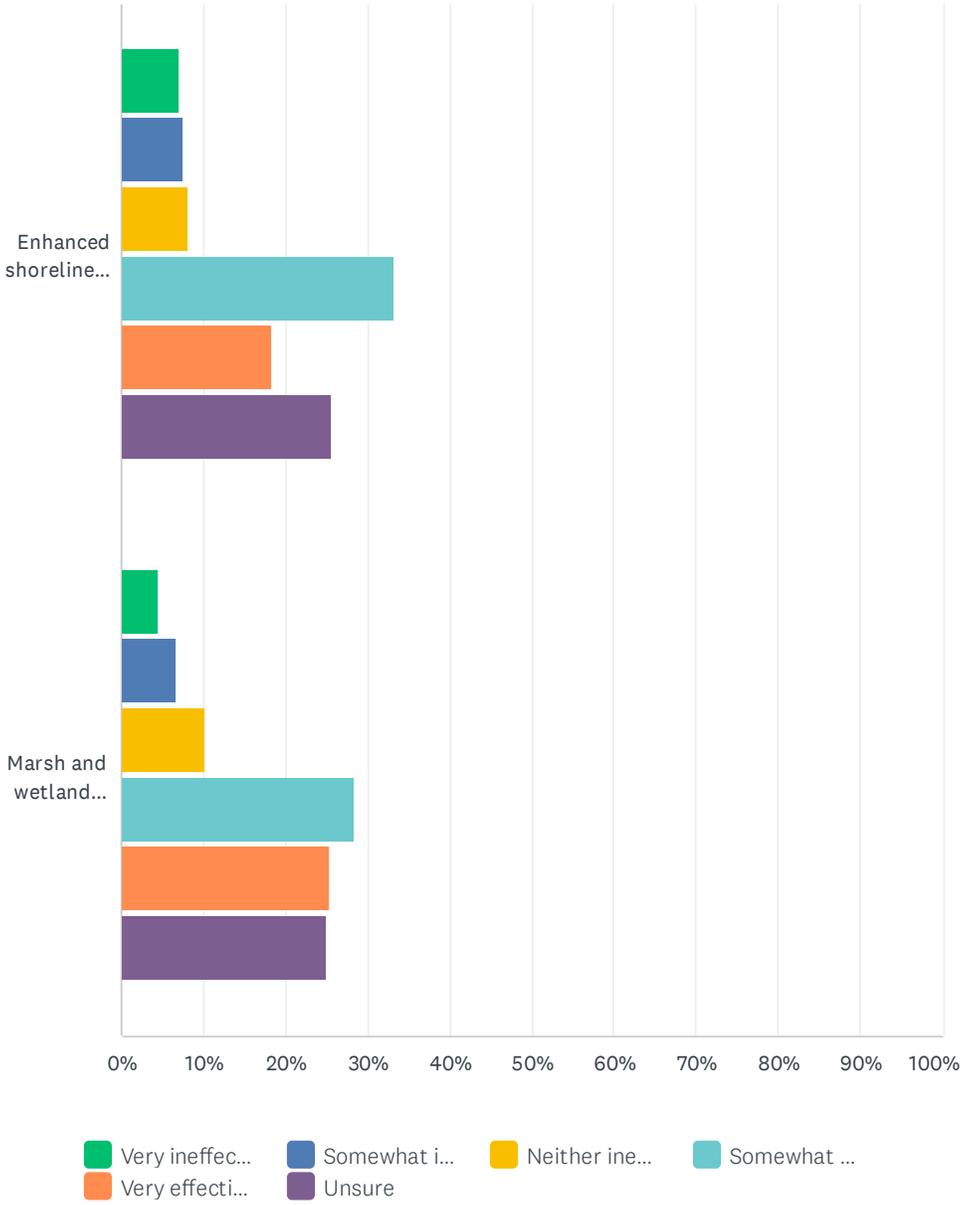
444	Guinea Mill watershed.	12/30/2021 9:32 PM
445	Flooding of Aydlett Road during heavy rains and storms.	12/30/2021 9:32 PM
446	Wedgewood Lakes floods horribly. Drainage is not good. Our retention ponds are stagnant.	12/30/2021 9:18 PM
447	Guinea Rd Tulls Creek Rd	12/30/2021 9:15 PM
448	South Mills Wedgewood Tulls Bay colony (by bridge) Poyners Rd	12/30/2021 9:09 PM
449	Lack of handicap accessible beach accesses in Corolla	12/30/2021 8:55 PM
450	Caratoke Hwy	12/30/2021 8:48 PM
451	Bells Island	12/30/2021 8:44 PM
452	Quail Run drive	12/30/2021 8:20 PM
453	The entire 4x4 area of Corolla. Should al be a service district. Too many houses. Most are rentals. The beaches are packed from May-Oct.	12/30/2021 7:34 PM
454	??	12/30/2021 7:33 PM
455	Countywide	12/30/2021 7:25 PM
456	N/a	12/30/2021 7:21 PM
457	Waterlily road	12/30/2021 6:36 PM
458	Na	12/30/2021 6:18 PM
459	Beechwood Shores Neighborhood, Poyners Rd, Hwy 168/currituck hwy	12/30/2021 6:13 PM

Q12 On the scale below, indicate the effectiveness or ineffectiveness of each item in providing flood protection and community resiliency to extreme hazards?

Answered: 668 Skipped: 253



Currituck County Coastal Resilience Questionnaire

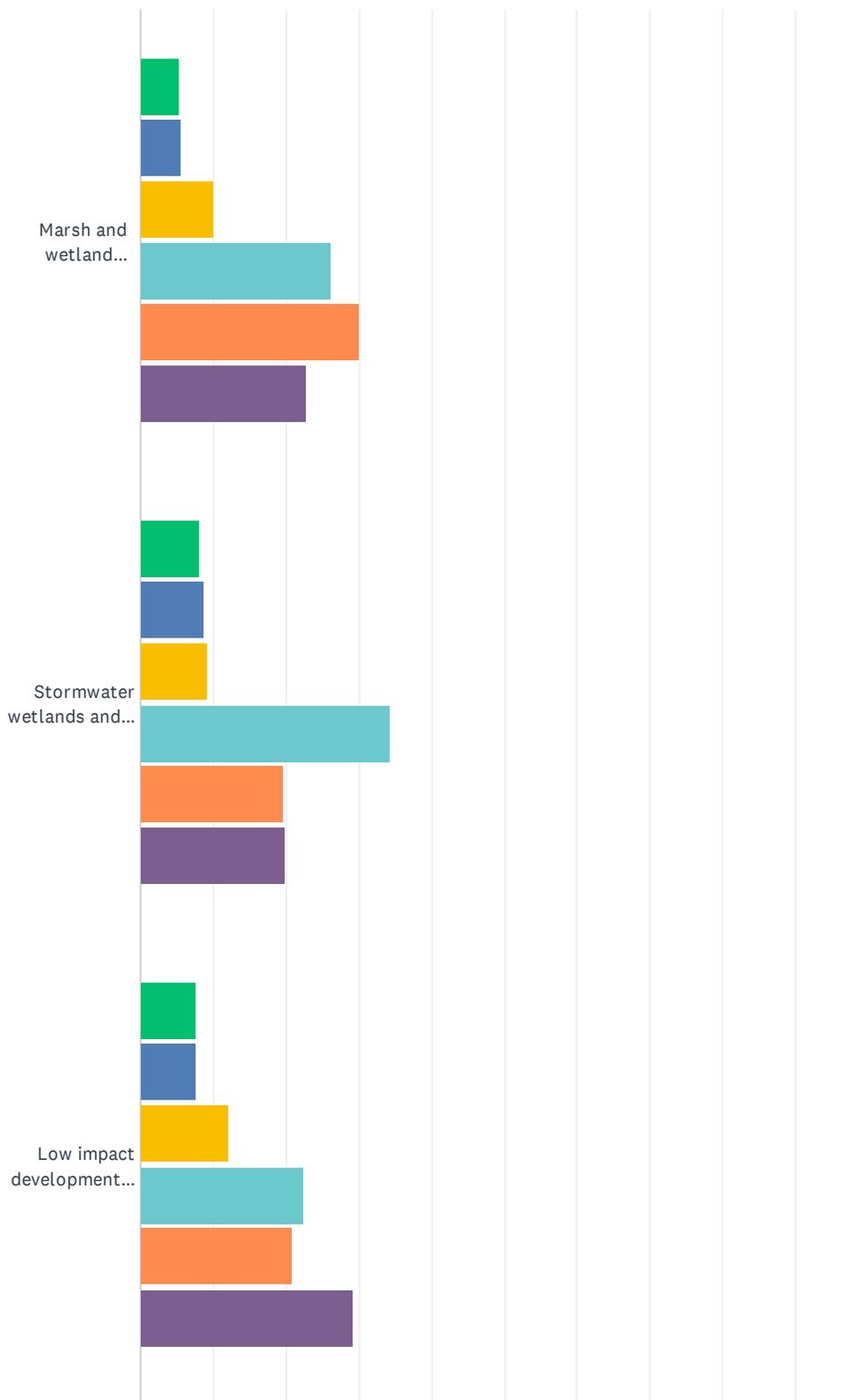


Currituck County Coastal Resilience Questionnaire

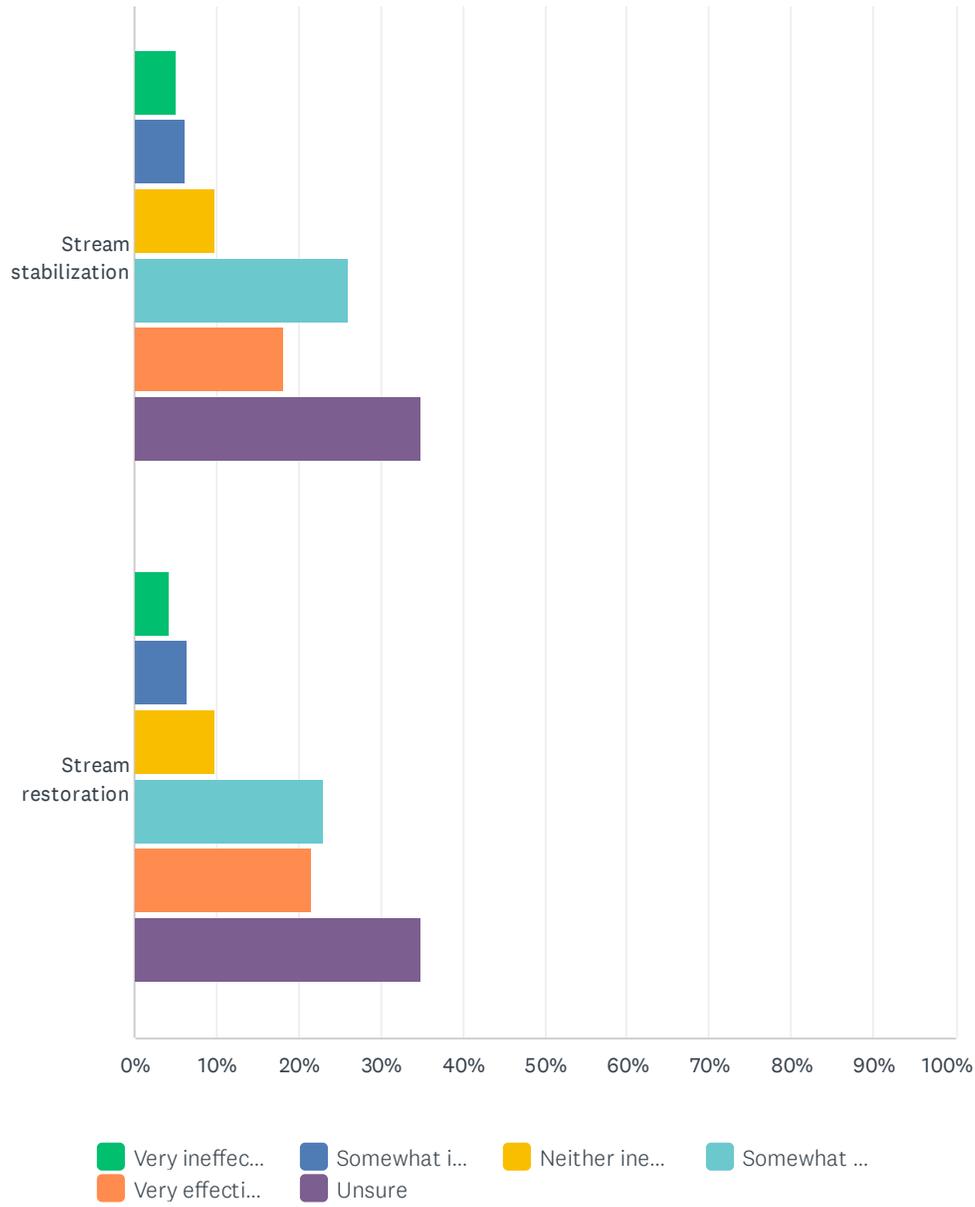
	VERY INEFFECTIVE	SOMEWHAT INEFFECTIVE	NEITHER INEFFECTIVE NOR EFFECTIVE	SOMEWHAT EFFECTIVE	VERY EFFECTIVE	UNSURE	TOTAL	WEIGHTED AVERAGE
Engineered beach (beach nourishment)	9.31% 62	10.21% 68	9.46% 63	36.49% 243	15.17% 101	19.37% 129	666	3.47
Soundside living shorelines (marsh sills)	3.48% 23	8.33% 55	12.88% 85	30.91% 204	17.12% 113	27.27% 180	660	3.69
Dune restoration (sand fencing, planting beach grass)	4.07% 27	7.84% 52	6.18% 41	40.12% 266	27.90% 185	13.88% 92	663	3.93
Enhanced shoreline revetments (rock/concrete erosion protection)	6.95% 46	7.55% 50	8.16% 54	33.23% 220	18.43% 122	25.68% 170	662	3.65
Marsh and wetland restoration	4.54% 30	6.51% 43	10.29% 68	28.29% 187	25.42% 168	24.96% 165	661	3.85

Q13 On the scale below, indicate the effectiveness or ineffectiveness of each item in providing flood protection and community resiliency to extreme hazards?

Answered: 631 Skipped: 290



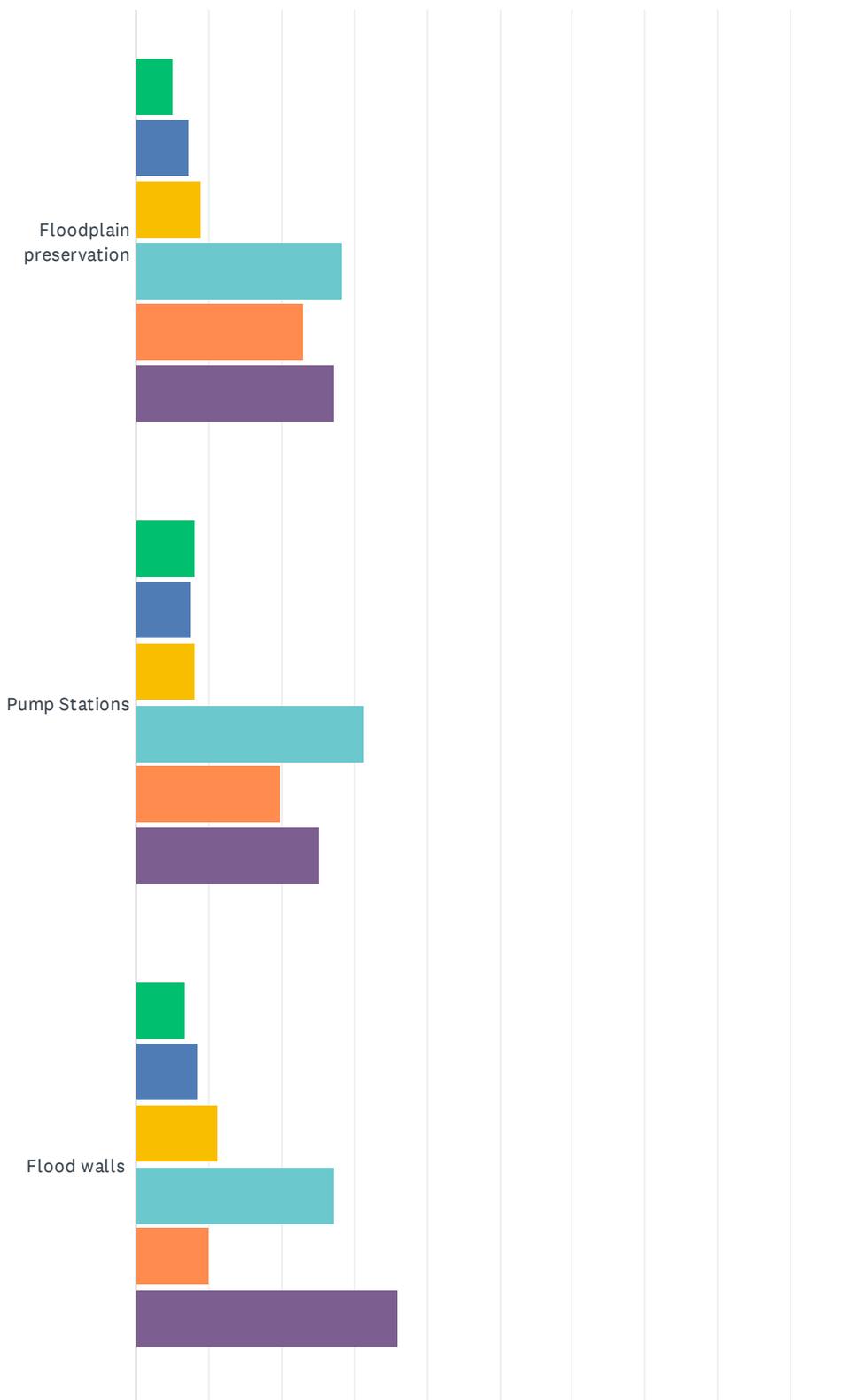
Currituck County Coastal Resilience Questionnaire



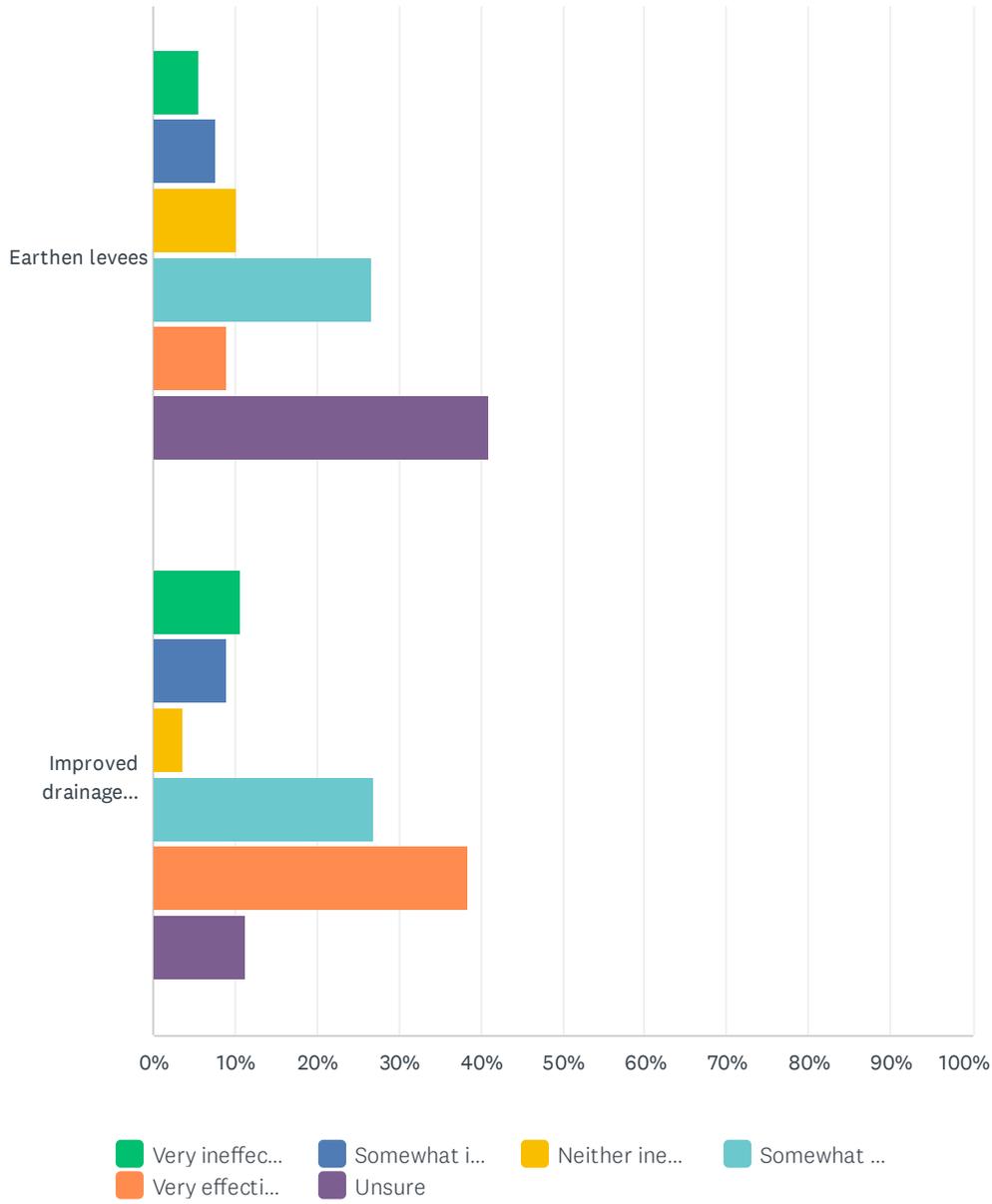
	VERY INEFFECTIVE	SOMEWHAT INEFFECTIVE	NEITHER INEFFECTIVE NOR EFFECTIVE	SOMEWHAT EFFECTIVE	VERY EFFECTIVE	UNSURE	TOTAL	WEIGHTED AVERAGE
Marsh and wetland preservation	5.40% 34	5.56% 35	10.00% 63	26.19% 165	30.00% 189	22.86% 144	630	3.91
Stormwater wetlands and ponds (SCMs)	8.12% 51	8.76% 55	9.24% 58	34.39% 216	19.59% 123	19.90% 125	628	3.61
Low impact development (LID)	7.67% 48	7.67% 48	12.14% 76	22.36% 140	20.93% 131	29.23% 183	626	3.58
Stream stabilization	5.12% 32	6.08% 38	9.76% 61	25.92% 162	18.08% 113	35.04% 219	625	3.70
Stream restoration	4.30% 27	6.37% 40	9.87% 62	23.09% 145	21.50% 135	34.87% 219	628	3.78

Q14 On the scale below, indicate the effectiveness or ineffectiveness of each item in providing flood protection and community resiliency to extreme hazards?

Answered: 600 Skipped: 321



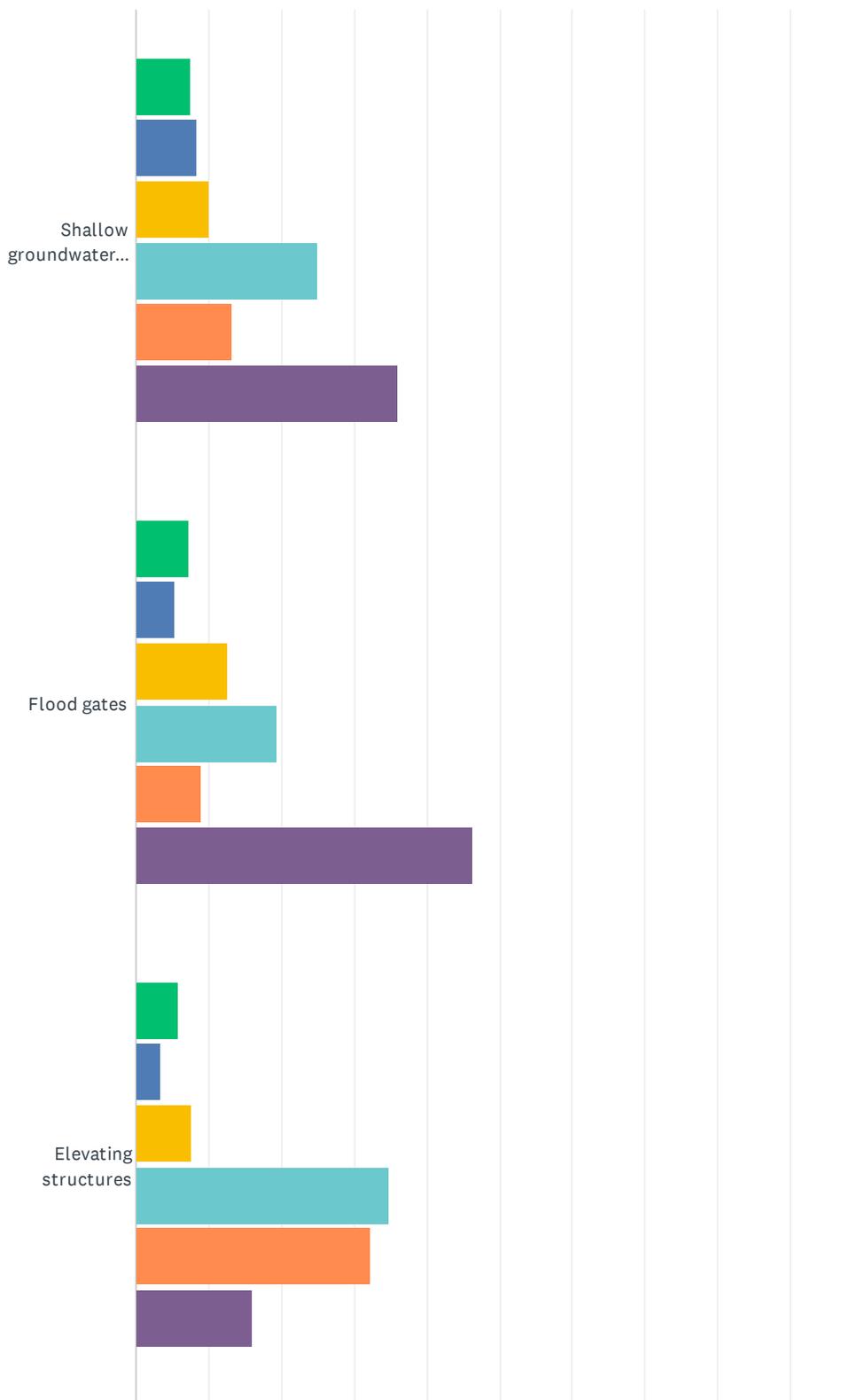
Currituck County Coastal Resilience Questionnaire



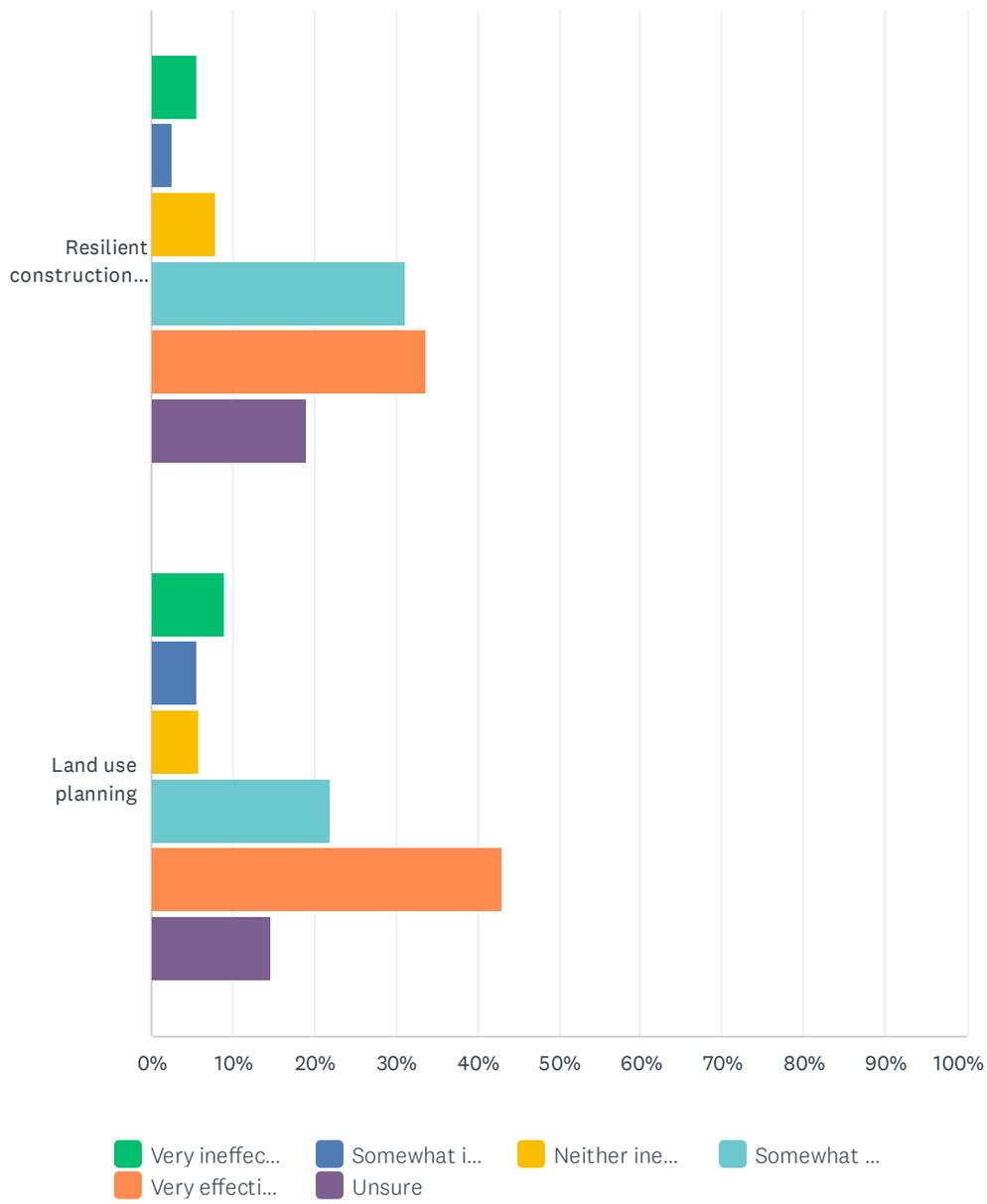
	VERY INEFFECTIVE	SOMEWHAT INEFFECTIVE	NEITHER INEFFECTIVE NOR EFFECTIVE	SOMEWHAT EFFECTIVE	VERY EFFECTIVE	UNSURE	TOTAL	WEIGHTED AVERAGE
Floodplain preservation	5.19% 31	7.20% 43	9.05% 54	28.31% 169	22.95% 137	27.30% 163	597	3.78
Pump Stations	8.19% 49	7.36% 44	8.03% 48	31.44% 188	19.90% 119	25.08% 150	598	3.63
Flood walls	6.89% 41	8.57% 51	11.26% 67	27.39% 163	9.92% 59	35.97% 214	595	3.39
Earthen levees	5.53% 33	7.71% 46	10.22% 61	26.63% 159	9.05% 54	40.87% 244	597	3.44
Improved drainage systems (i.e., ditches and pipes)	10.70% 64	9.03% 54	3.68% 22	26.92% 161	38.29% 229	11.37% 68	598	3.82

Q15 On the scale below, indicate the effectiveness or ineffectiveness of each item in providing flood protection and community resiliency to extreme hazards?

Answered: 584 Skipped: 337



Currituck County Coastal Resilience Questionnaire



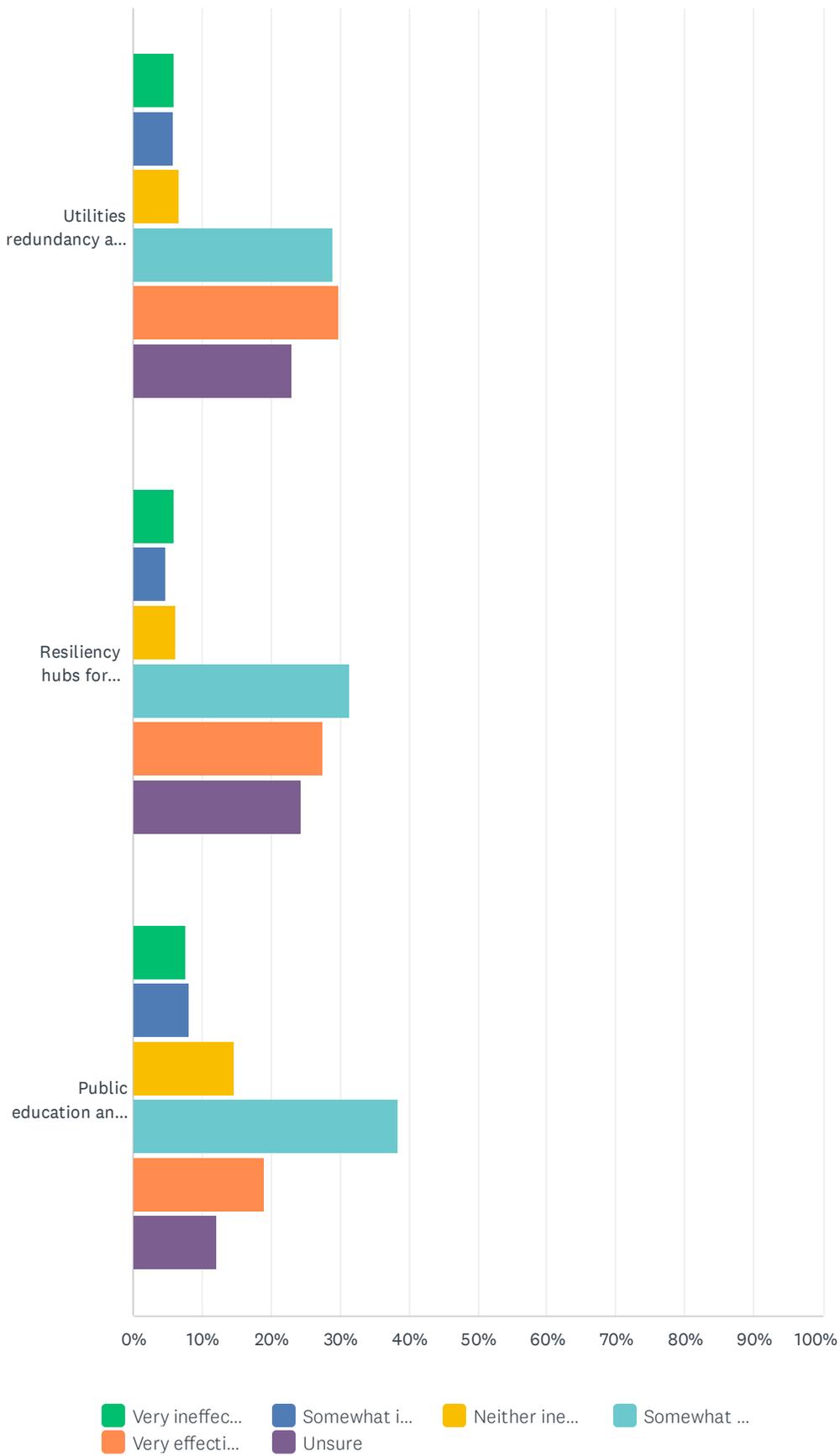
Currituck County Coastal Resilience Questionnaire

	VERY INEFFECTIVE	SOMEWHAT INEFFECTIVE	NEITHER INEFFECTIVE NOR EFFECTIVE	SOMEWHAT EFFECTIVE	VERY EFFECTIVE	UNSURE	TOTAL	WEIGHTED AVERAGE
Shallow groundwater pumping (before major storms)	7.41% 43	8.28% 48	10.00% 58	25.00% 145	13.28% 77	36.03% 209	580	3.44
Flood gates	7.29% 42	5.38% 31	12.67% 73	19.44% 112	9.03% 52	46.18% 266	576	3.33
Elevating structures	5.70% 33	3.45% 20	7.77% 45	34.72% 201	32.30% 187	16.06% 93	579	4.01
Resilient construction standards	5.54% 32	2.60% 15	7.96% 46	31.14% 180	33.74% 195	19.03% 110	578	4.05
Land use planning	8.97% 52	5.52% 32	5.86% 34	21.90% 127	43.10% 250	14.66% 85	580	3.99

Q16 On the scale below, indicate the effectiveness or ineffectiveness of each item in providing flood protection and community resiliency to extreme hazards?

Answered: 572 Skipped: 349

Currituck County Coastal Resilience Questionnaire



Currituck County Coastal Resilience Questionnaire

	VERY INEFFECTIVE	SOMEWHAT INEFFECTIVE	NEITHER INEFFECTIVE NOR EFFECTIVE	SOMEWHAT EFFECTIVE	VERY EFFECTIVE	UNSURE	TOTAL	WEIGHTED AVERAGE
Utilities redundancy and backup	5.95% 34	5.78% 33	6.65% 38	28.90% 165	29.77% 170	22.94% 131	571	3.92
Resiliency hubs for post-storm power and supplies	6.01% 34	4.59% 26	6.18% 35	31.27% 177	27.56% 156	24.38% 138	566	3.92
Public education and outreach	7.69% 44	8.04% 46	14.69% 84	38.29% 219	19.06% 109	12.24% 70	572	3.60

Q17 If you have anything else that you would like to share with us, please let us know!

Answered: 144 Skipped: 777

#	RESPONSES	DATE
1	No	1/21/2022 3:04 AM
2	Stop building new housing.	1/20/2022 10:47 AM
3	Overdevelopment!	1/20/2022 10:01 AM
4	County to provide riprap for shoreline residents on mainland Currituck.	1/19/2022 6:47 PM
5	DOT will not address the low street elevation on Bells Island. That along with no drains cause water to stand on the road every time it rains.	1/19/2022 8:43 AM
6	Developers seem to have the most power with little regard for both residents and property owners.	1/15/2022 7:44 PM
7	Over building of houses. Not enough schools, grocery stores, pharmacies, etc to meet the rising population.	1/14/2022 8:03 AM
8	We just want affordable housing in Corolla	1/13/2022 11:13 PM
9	We are going to be stuck on Knotts Island if they don't do something with road and bridge	1/13/2022 5:41 PM
10	I can't even get the street fixed, so that tells me how ineffective local government is	1/12/2022 2:13 PM
11	Actually embrace new and growth rather than tear it down, allow something other than a dollar store to be constructed. Have foresight for education. Build a new high school or 2 now!!! Other counties have 2-5 high schools combined with middle schools. Embrace new.	1/12/2022 12:34 PM
12	ONCE IS BUILT ITS DESTROYED FOREVER. YOUR DESTROYING THE COUNTY AND WERE LOSING OUR CULTURE TO THE ALMIGHTY DOLLAR!	1/12/2022 7:41 AM
13	Bring our tax dollars back to Corolla for improvements instead of mainland.	1/12/2022 1:37 AM
14	Currituck county needs to build a shelter that elderly and their pets can go during a weather event	1/11/2022 11:26 PM
15	Unable to get any answers to ditch maintenance, farm land allowed to drain into public ditch, but private land owners not allowed to drain in to farm ditches. No way to fix owners land flooding, no help from Currituck.	1/11/2022 5:55 PM
16	Ditches need to be clean out to help drainage	1/11/2022 11:58 AM
17	The rate of growth is exceeding infrastructure... causing more flooding to existing areas that didn't flood. Ditches, canals are filling in. Homeowners/builders are filling in ditches that were so important to drainage. The ponds in new neighborhoods are full the minute they're dug...(Guinea road) and there's now gas lines buried in and next to ditch that will inhibit mechanical clean outs ??	1/11/2022 11:39 AM
18	On a barrier island flooding and storms are going to happen. You can't build your way out of flooding and storms. Public education, preparation and support systems, improvements where possible will be helpful.	1/10/2022 8:36 PM
19	Please fix the lack of Drainage on Old Tulls Creek Road	1/10/2022 4:44 PM
20	Trash on the roadways lying in the ditches	1/9/2022 7:23 PM
21	Stop trying to pls new residents of Moyock. They want to bring their non-country and high taxes way of life to Currituck. We love our tax rates and understand NOTHING IS FREE! We need a moratorium on slowing down growth until our schools and infrastructure can catch up! Thank you for listening...	1/8/2022 10:39 PM
22	There is a tremendous amount of litter on the highway	1/8/2022 9:36 PM

Currituck County Coastal Resilience Questionnaire

23	Thank you for this Survey. Please Note the main drainage ditches along the Jarvisburg "East side" of the Bypass ie Buster Newn area, S Bayview/Jarvisburg Rd and White Acres at the Horse Shie poorly Drains in heavy rainfall. We have cleared ours as much as possible however it's not enough. The Main drainage on the East Side within that are are in serious need of attention.	1/8/2022 9:04 PM
24	Need to stop building new communities and take care of what's already here.	1/8/2022 8:23 PM
25	We need accommodations for seniors and additional resources for them. Currituck has none. Just new homes for out of state families.	1/8/2022 7:01 AM
26	Ditches are not cleared on 168	1/7/2022 8:36 PM
27	If they would keep the ditches clean we wouldn't have an issue on E Ridge	1/7/2022 4:12 PM
28	I really don't have any idea of what Currituck County's plans are to address these issues. Especially with the significant growth anticipated in the future.	1/7/2022 2:59 PM
29	Vaccination sites for Covid shots.	1/7/2022 10:08 AM
30	:)	1/6/2022 10:28 PM
31	On many of the last items I marked unsure Because I have not seen these things on Knotts Island. I believe in marsh restoration but I have yet to see it.	1/6/2022 6:54 AM
32	My biggest pet peeve with the county is probably the speed limit. It looks like a highway, and we need to discourage the idea that the road is an interstate. A county wide 45mph speed limit is needed right now. I am just one citizen who is tired of seeing school aged kids die on these roads. But seriously, we need to definitely invest in shoring up Currituck against the rise in sea levels that will happen. The 25-50 year model has a lot of NE North Carolina underwater. We can't get the Republicans to do anything about Climate Change, so we need to do our best to save our communities on a local level by investing now.	1/5/2022 1:21 PM
33	Need another evacuation route for northern beaches	1/5/2022 10:44 AM
34	Less development is a step in the right direction to mitigating environmental risks.	1/5/2022 6:26 AM
35	Mid currituck bridge is needed for both work oportunities and traffic reduction to make summers manageable to both coastal and mainland currituck.	1/4/2022 11:25 PM
36	My answers to 11 thru 15 do not mean these things ARE BEING DONE. For example, beach nourishment is highly effective but is not happening here like it is in Dare County. Also the road lines desperately need painted between Duck and Corolla (hwy 12). It's impossible to see the roads at night especially with rain and/or approaching headlights. Extreme safety hazard!	1/4/2022 7:54 PM
37	There is way too much building happening and there is nowhere for the water to go and you guys don't account for that when you allow a million homes to be built	1/4/2022 3:16 PM
38	Stormwater drainage in my particular subdivision needs attention.	1/4/2022 12:24 PM
39	Na	1/4/2022 11:45 AM
40	Na	1/4/2022 10:37 AM
41	Over building is causing more water drainage issues. The new development between Corolla light and the lighthouse beach access had major water drainage problems with this past storm already. It flooded every where.	1/4/2022 9:43 AM
42	No	1/4/2022 9:43 AM
43	The drainage ditches in the County are useless and ineffective, they are not leveled and engineered to drain. After a heavy rain places along Grandy Rd fill and become impassable.	1/4/2022 9:00 AM
44	Sand Dollar Court floods and almost always has standing water and street erosion. No drainage from rain water.	1/4/2022 8:39 AM
45	Property Taxes are way too high	1/3/2022 9:31 PM
46	If there are any panels or volunteer opportunities please let me know as I would like to participate! I am an architect and city and regional planner with a keen interest for coastal community resiliency.	1/3/2022 7:51 PM
47	Once again causeway to Knotts Island underwater today. See recent improvements but not high enough yet. Sad.	1/3/2022 7:30 PM

Currituck County Coastal Resilience Questionnaire

48	Thank you for the survey	1/3/2022 3:59 PM
49	thanks for doing this!	1/3/2022 3:33 PM
50	The county for 40 years avoided many of these questions. It is just now beginning to step up and has a long way to go on the community relations issues.	1/3/2022 2:53 PM
51	As a new resident I'm concerned about how much new developers have been promised (bridge, etc). It seems the county spends the revenue on the mainland while the beach erosion is ignored. If we don't take care of the beaches, and invest in our tourism, we won't have the funds in the future. Lots of money is being spent In Duck, but I don't see funding going to Corolla or Corova. As a permanent homeowner, we'd like to see year round businesses here in corolla.	1/3/2022 2:20 PM
52	Need to build the Mid Currituck bridge to provide safety to exit and help needed during when these conditions.	1/3/2022 11:31 AM
53	Over development is already causing major issues with flooding/drainage, storm water, and over burdening our systems and we are already approved for so much more. We will end up worse than Pungo and the damage to our community with be irreparable on our current path.	1/3/2022 10:57 AM
54	Please convince Currituck County Commissioners of the importance of beach restoration before they lose tax base and the rest of their competitiveness in the beach vacation industry	1/3/2022 10:16 AM
55	On the OBX we need more than one road to get off this island in a evacuation alert .RT 12 is narrow and in the summer and fall there are too many people here for the road to handle	1/3/2022 9:54 AM
56	Flooding is a major problem in Ocean Sands	1/3/2022 9:50 AM
57	The Country could clear the ditches so the water would run off and not stand for long periods of time.	1/3/2022 8:30 AM
58	The county does absolutely nothing for Corolla. All the occupancy tax is used for the mainland. Route 12 North is a disaster.	1/3/2022 8:13 AM
59	Stop building so we have more land to soak up water. Demand all ditched on land remain when Developing property.they were put there for a reason	1/3/2022 7:32 AM
60	The Corolla beach is in need of restoration, similar that being done in Dare Co.	1/3/2022 12:21 AM
61	The entire Currituck govt system is corrupt and nepotism runs rampant.	1/2/2022 9:43 PM
62	Thanks for asking.	1/2/2022 9:12 PM
63	They need to spend more monies improving the island portion of the county. This is where they get the most taxes to fund the county government.	1/2/2022 9:06 PM
64	Ocean Sands in Corolla NEEDS storm water management ASAP!! Flooding happens with even a minimal rain event. Our house has flooded four times with a foot of water in our house each time! There is NO flood mitigation at this time! HELP!!! Immediate action is imperative!!!	1/2/2022 8:42 PM
65	Nothing has been done to address the flooding or beach erosion in Corolla so your questions of effectiveness are moot. Do something to help and then ask how effective it is!	1/2/2022 8:39 PM
66	Need more information about how Corolla fits in with Currituck County	1/2/2022 7:53 PM
67	Testing of lakes and ponds in the area for bacterial counts, especially after heavy rains and storms! Better alerts to visitors as to the hazards of standing water...bacteria contamination. Have seen on several restaurant reviews where the restaurants were blamed for people getting sick, these posts happen to come at the same time there is a lot of flooding and standing water! Could have come from visitors walking through standing water!	1/2/2022 6:11 PM
68	Please limit the building in this county. Also, please take care of public utilities, like public sewers, before promoting more growth.	1/2/2022 6:10 PM
69	Corolla seems to have little land left that isn't earmarked for development. The area is going to be saturated with homes and the infrastructure is not here to keep up with this. Rt 12 can be dangerous with deep standing water fir days after a storm. Buck Island's storm draining seems to be the most effective of the large communities. Hopefully all new construction has similar drainage. Ocean Sands is terrible.	1/2/2022 6:06 PM
70	Survey was a good idea for developing baseline data.	1/2/2022 5:58 PM
71	Stop overbuilding in Corolla	1/2/2022 5:36 PM

Currituck County Coastal Resilience Questionnaire

72	Please get the flooding under control. Raw sewage has been witness on Fishermans Ct 2 years ago .	1/2/2022 5:36 PM
73	For many of the "effectiveness" questions I have no idea if Currituck County has employed these in Corolla.	1/2/2022 4:21 PM
74	The average citizen is not qualified to asses answers to most of the opinion answers	1/2/2022 3:23 PM
75	Re Swan Beach: Please help us be proactive in maintaining the road ways in such a manner that when we get heavy rains and have high water tables that the water has somewhere to retreat - like higher on one side with swales cut in on the other side, and retention ponds. Stop horse tours from traveling on standing water in roadways. Create routes for horse tours to spread out out the damage to our roadways.	1/2/2022 2:13 PM
76	I was insulted by the questions involving race, age & income/asset levels. They're totally irrelevant to these issues. This is why people have little faith in government.	1/2/2022 2:09 PM
77	There should be a sliding scale from ocean and sound front vs currituck mainland on all of this. As building booms and changes all environmental mental factors.	1/2/2022 2:07 PM
78	Increase minimum lot sizes. I would hate to think that in 10 years this place could be paved over.	1/2/2022 1:37 PM
79	Our big concern is evacuation and return procedures since we have to travel through Dare County.	1/2/2022 1:29 PM
80	Corolla floods badly and I am not aware of any current programs that are set up to remediate the flooding	1/2/2022 1:05 PM
81	Build a playground please	1/2/2022 12:58 PM
82	Invest in beach nourishment to continue to obtain funds from the tourism.	1/2/2022 12:48 PM
83	Build the bridge	1/2/2022 12:47 PM
84	Beach nourishment!	1/2/2022 12:39 PM
85	These beaches need nourishment. It is irresponsible not to do so.	1/2/2022 12:03 PM
86	Remove debris from streams	1/2/2022 11:58 AM
87	Why aren't you sharing this survey on social media?	1/2/2022 11:57 AM
88	County needs to limit development in low lying areas an be ready to pump water out of low lying roads	1/2/2022 11:52 AM
89	BUILD THE MID-CURRITUCK BRIDGE. If you are worried about resiliency and recovery. Why is Currituck County relying on Dare county for access? Not to mention the revenue from tolls that can go to funding other coastal initiatives.	1/2/2022 11:48 AM
90	I think you're doing great and heading in the right direction to prepare for larger scale storms	1/2/2022 11:34 AM
91	We will lose the horses if building limits are not ameliorated. Also, our aquafers cannot handle continued development.	1/2/2022 11:00 AM
92	Whether it's money or authority the county needs a plan to clean and maintain ditches that are on private property and drain roads and community's. The problem just gets worse as we develop more and try to drain stormwater into already blocked ditches.	1/2/2022 7:59 AM
93	Need to do way better and storm drainage management- too much flooding along roadways after minor rain storms	1/2/2022 7:46 AM
94	Add definitions or examples to these questions as many of these terms are unknown/not used by normal population. You will get skewed or unuseful results due to this.	1/2/2022 7:06 AM
95	Beach renurshment is like building a sandcastle at low tide and expecting it to be there after high tide. Look at the Morons with the Dunes protection of high 12 and the money wasted. Can you say Sea Wall. Dunes are not natural either. They were built by man. Also learn from Va Beach. High rises increases erosion like bulkheads dredge in front of them.	1/2/2022 6:58 AM
96	We can't stop Mother Nature	1/2/2022 3:36 AM
97	The 4x4 beaches are a different world. Thanks to the county for regrading our block on Sandfiddler. It was consistently flooded in the winter and sometimes in the summer. I do have	1/1/2022 11:37 PM

Currituck County Coastal Resilience Questionnaire

confidence that Currituck will pursue coastal resilience intelligently.

98	The country need a more proactive approach on clearing roadside ditches on public and private roads.	1/1/2022 10:16 PM
99	Stop the overdevelopment. We have enough planned communities already. Build the mid-Currituck bridge to let mainland easier access to the Currituck beaches and to ease evacuations in weather emergencies.	1/1/2022 8:56 PM
100	County doesn't have the backbone to raise taxes to deal with flooding issues, heavy reliance on retention ponds. Corp did a comprehensive assessment and gave multiple solutions based on funds available to date nothing has been done	1/1/2022 8:47 PM
101	we have asked our county commissioners for flood plans for carova they have yet to comply. it has been YEARS. our comissioners are a disgrace and cannot be bothered to even come to the off road to meet with residents.	1/1/2022 8:42 PM
102	Would like to see better options for growth in county with more commercially stabilized jobs vs tourism based employment only . Also better options for internet and cable services. And lastly more options for or sporting events to be able and house people in hotels locally instead of sharing with neighboring countries or areas we lose lots of revenue. And lastly build the mid county bridge already.	1/1/2022 6:23 PM
103	Stop allowing builders to over populate our county.	1/1/2022 5:05 PM
104	Learn to spell moyock in your survey	1/1/2022 4:24 PM
105	Please don't let the rest of the county wind up like Moyock.	1/1/2022 3:18 PM
106	Drainage ditches need help ?	1/1/2022 11:39 AM
107	more descriptive explanations of terms used would be helpful in determining what is useful	1/1/2022 11:31 AM
108	We need the pumping station back in the false cape state park that pumped salt water into back bay. It's become polluted and to much milt weed	1/1/2022 11:18 AM
109	Stop the over development!	1/1/2022 8:15 AM
110	What do you think would happen as you allow all the trees to be cut down to build places like fose	1/1/2022 8:15 AM
111	Who ever approved the location of the Wendy s in moyock used poor judgement and there are always wrecks in front of that place	1/1/2022 6:34 AM
112	County need to truly listen to those who have lived here over the years and are still currently living here to get a true sense of how things are changing wether it be environmentally or due to population growth in our area	1/1/2022 6:27 AM
113	Stop building houses until you can maintain sewage issues. Listen to the residents about growth. Deal with the tax increases that are impacting long term residents due to all the new growth. Deal,with the dump sites that you increased fees for that cannot keep up with the amount of trash in the county. Dumpsters are full more often than not.	1/1/2022 3:15 AM
114	Affordable housing 125,000 are not being built. Starting homes and affordable rentals not available. So moving not an option. Moyock doesn't fix current flooding before allowing more buildings. We need county sewage due to new water table caused by development in last 10 years. Each storm risks over road flooding. Be need pumping and piping to avoid over road flooding.	1/1/2022 2:47 AM
115	We need to lessen development and build more conservation stretches in Carova. We also need to limit vehicle traffic and enforce low tore pressure to preserve the beach strand and protect the sand roads.	12/31/2021 9:37 PM
116	Beach replenishment in needed and funds collected at the beach should stay at the beach	12/31/2021 8:31 PM
117	Nothing	12/31/2021 8:19 PM
118	Beach. Nourishment is an extreme waste of money. I would be very opposed to my tax dollars being used for such an endeavor.	12/31/2021 6:38 PM
119	Need planned shelters on the mainland	12/31/2021 6:05 PM
120	Slow the development until the necessary infrastructures are in place	12/31/2021 4:04 PM

Currituck County Coastal Resilience Questionnaire

121	Only a fool would not agree that our extremely poor stewardship of this planet has caused and environment crises that is now an active reality. The county and state should pull out all the stops in educating the public and promoting environmentally responsible behaviors so that this and future generations will be doing their part to save this planet and, consequently, the human species. Our purpose on this planet is to keep the human species alive long enough to grow and advance in our knowledge so that we have the technology and ability to safely immigrate to other solar systems in our galaxy where we might find planets that would be friendly to human life. That may be hundreds of years from now. But, if we don't act now to save this planet, we'll never achieve that goal.	12/31/2021 1:56 PM
122	Over development is rampant in Currituck County	12/31/2021 1:54 PM
123	Taking a better look at the over building in the Corolla area and how it will relate to the diminishing quality of a popular tourist area.	12/31/2021 1:03 PM
124	Areas of Currituck Outer Banks are becoming overdeveloped, leaving nowhere for stormwater to go other than onto the highway, causing major traffic delays and difficulties in traveling.	12/31/2021 12:59 PM
125	Categorizing property as flood prone simply because they may get standing water in thier yard is clearly an effort to make poor people pay for flood insurance because the ins company wants more money than they can get from the real risks on the shores and coastline. People in Shawboro should not be paying flood ins so that people in Carova can enjoy lower rates.	12/31/2021 8:51 AM
126	Beach community needs stronger building codes to limit impermeable surface. Massive homes cause excess sewage and storm water flooding.	12/31/2021 7:57 AM
127	Need more control over beach access.	12/31/2021 7:53 AM
128	The people of Currituck are resilient. This survey is biased and garbage.	12/31/2021 7:28 AM
129	You spelt moyock wrong	12/31/2021 7:02 AM
130	Do something about the drainage ditches for Quail Run!!!	12/31/2021 5:17 AM
131	Gotta improve internet bandwidth and services in Powells Point area. Not enough options	12/31/2021 1:41 AM
132	Route 12 north from Southern Shores to Carova 4x4 beach ramp - road has potholes that have been patched. The area near The Hampton Inn in Corolla is the worst. The patched areas are rough to drive over. The entire Road will need to be repaved prior to the 2022 tourist invasion. I hope this project is part of the 2022 county budget.	12/31/2021 1:41 AM
133	More trees, fewer houses.	12/31/2021 1:14 AM
134	Need the bridge connecting Corolla with the mainland	12/31/2021 12:41 AM
135	The new bridge to connect Currituck County mainland to the area near Rt. 12 would be beneficial to Corolla. It would help reduce traffic through Dare County and reduce the time for visitors/property owners to come to the Rt. 12 area of Corolla.	12/30/2021 11:12 PM
136	If you are asking if the previous questions are what is needed then yes. But if you are asking if I feel Currituck county is doing those things the answer is no.	12/30/2021 11:06 PM
137	NA	12/30/2021 10:38 PM
138	The counties infrastructure is very lacking for the amount of new homes being built in Moyock. Roadways are too narrow, in bad shape and tourist traffic bottles of the locals.	12/30/2021 9:51 PM
139	We have no storm water management or drainage matinance. Dot doesn't clear blocked drainage pipes.	12/30/2021 9:41 PM
140	Our ditch at Aydlett Road/O'Neal Lane doesn't flow because the other ditches in the neighborhood are shallower than our.	12/30/2021 9:41 PM
141	We need low cost housing. We need to limit housing for non residents in Corolla and Corova. There does not seem to be any land use protections. Need to not have the county run by real estate interests.	12/30/2021 8:11 PM
142	The building surge is going to cause greater problems. The 4x4 area floods. Roads are not maintained. The lee needs to be some compromise. Possibly reaching out to Friedman's. Service district is a must. Work with feds to have a deal regarding pumping	12/30/2021 7:38 PM
143	Need paid fire throughout the entire County, for many reasons.	12/30/2021 7:27 PM
144	It seems that increased building has lead to increased erosion and flooding/ water retention in	12/30/2021 6:43 PM

Currituck County Coastal Resilience Questionnaire

our area. Engineers should not approve development that will have a negative impact on neighbors or roads (such as building up lots leading to flooding on adjacent lots or the road)

Q18 If you would like to stay connected with us as this project progresses, provide your name and email address below.

Answered: 167 Skipped: 754

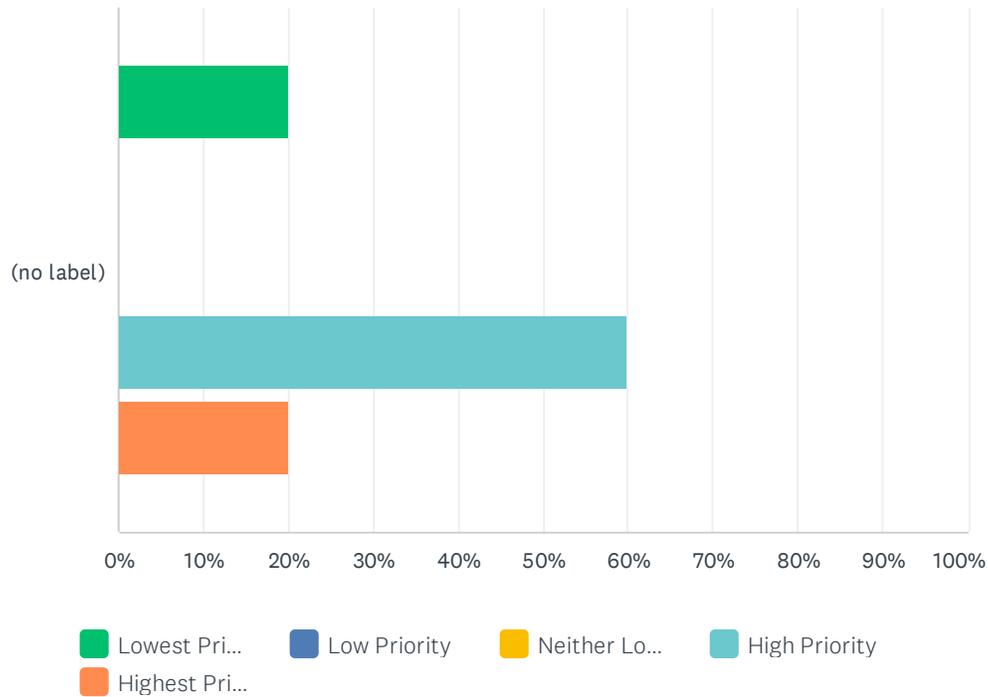
ANSWER CHOICES	RESPONSES	
Name	97.60%	163
Company	0.00%	0
Address	0.00%	0
Address 2	0.00%	0
City/Town	0.00%	0
State/Province	0.00%	0
ZIP/Postal Code	0.00%	0
Country	0.00%	0
Email Address	98.80%	165
Phone Number	0.00%	0

Responses obscured for privacy

Responses obscured for privacy

Q1 Stormwater Pump Stations Installation of three stormwater pump stations to reduce flooding from stormwater in canals at Ranchland Drive and Green View Road/Eagle Creek subdivision at the crossing of NC 168. This project was identified in the Currituck County Resilient Redevelopment Plan as Housing Action 2.

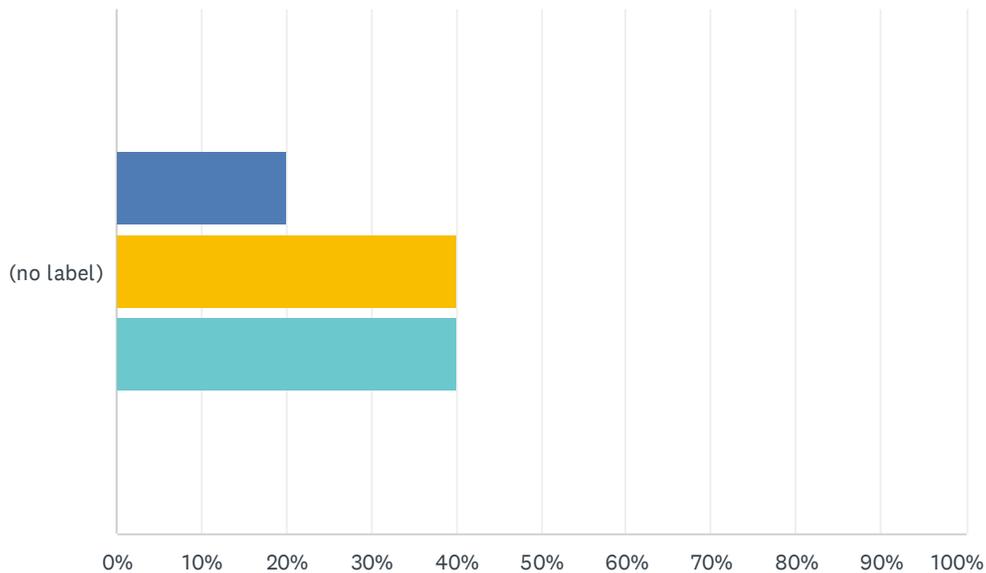
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	20.00% 1	0.00% 0	0.00% 0	60.00% 3	20.00% 1	5	3.60

Q2 Marsh Sill and Shoreline Restoration - Coinjock Bay Marsh Sills at 3581 Caratoke Hwy - a marsh sill and shoreline restoration at this location serves to protect the roadway and has the potential to be developed as a public water access. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds.

Answered: 5 Skipped: 0

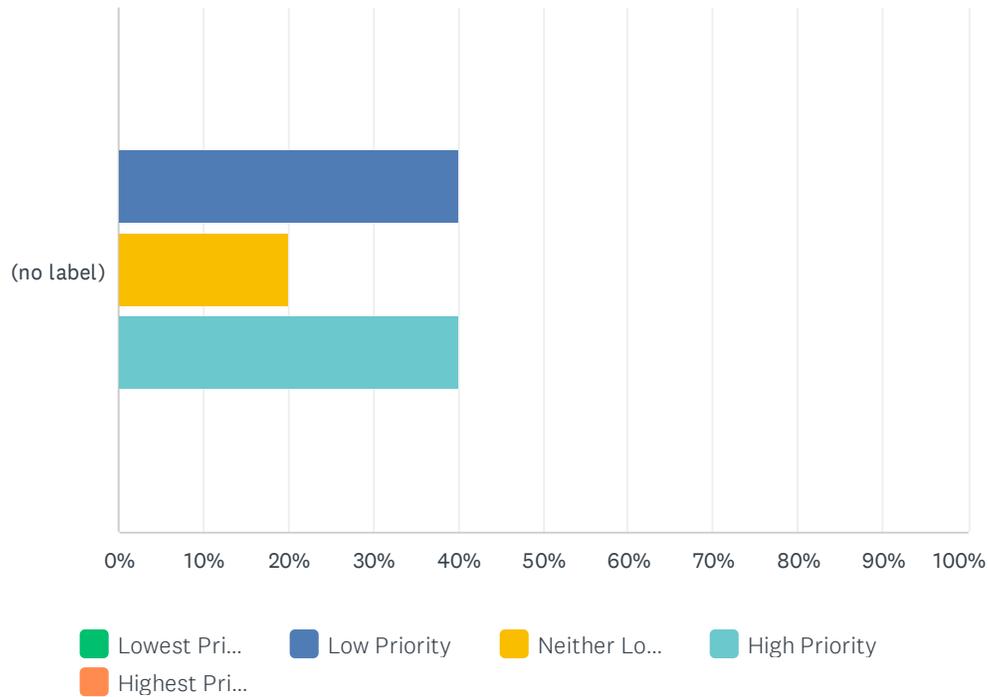


■ Lowest Pri...
 ■ Low Priority
 ■ Neither Lo...
 ■ High Priority
 ■ Highest Pri...

	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	20.00% 1	40.00% 2	40.00% 2	0.00% 0	5	3.20

Q3 Marsh Sills - Tulls Creek Rd Marsh sills at 1485 Tulls Creek Rd - a marsh sill at this location serves to protect the roadway and additional water quality benefits. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds.

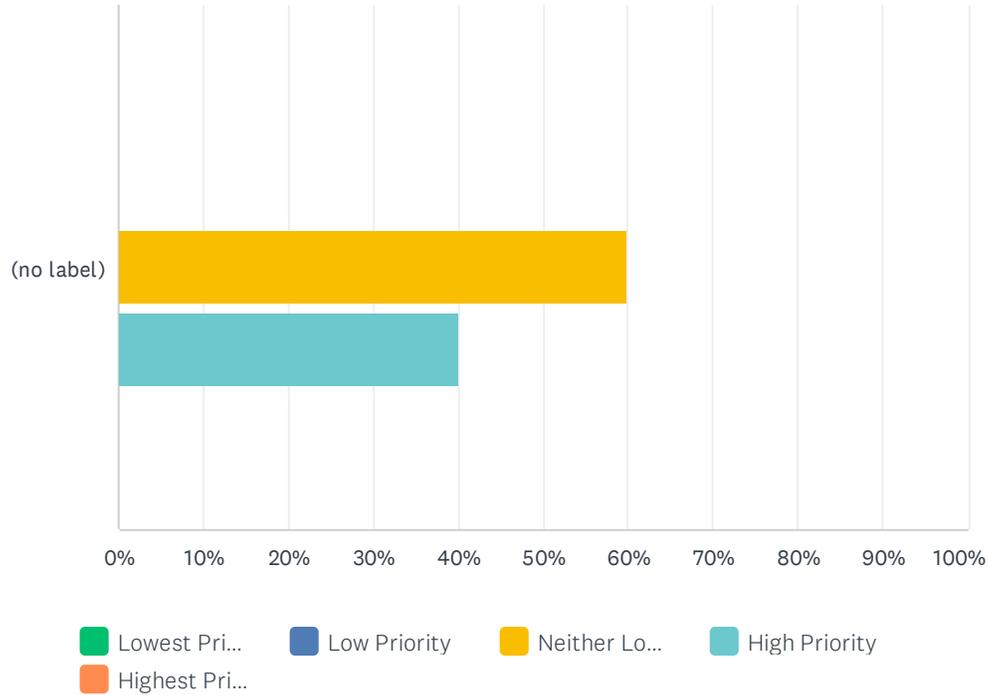
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	40.00% 2	20.00% 1	40.00% 2	0.00% 0	5	3.00

Q4 Bells Island Road Shoreline Protection A living shoreline at this location serves to protect the roadway which was identified as a hot spot in the citizen survey. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds.

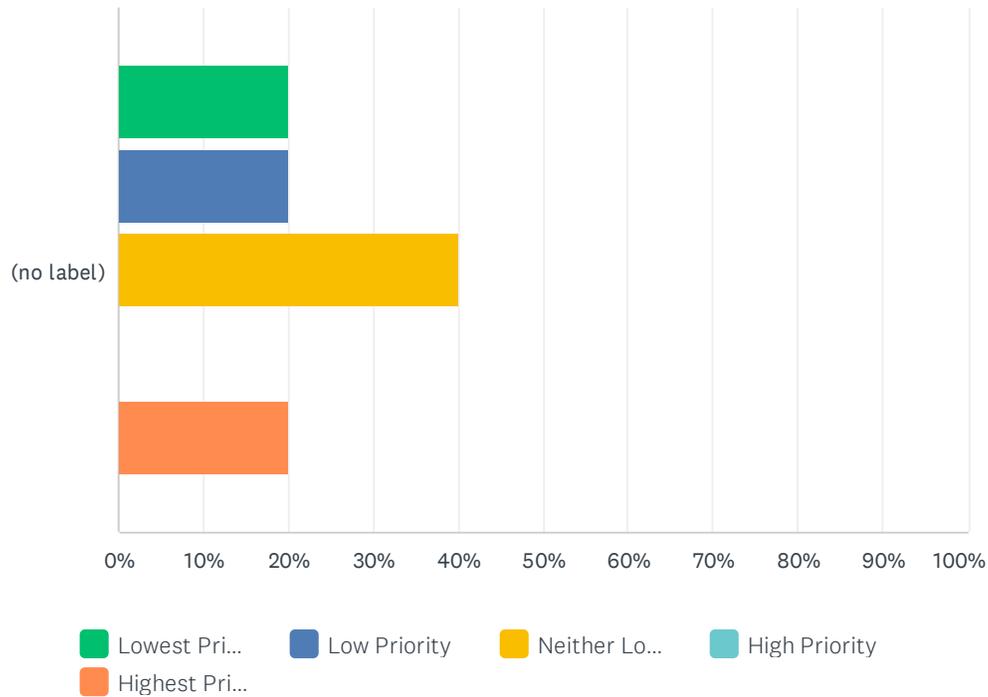
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	60.00% 3	40.00% 2	0.00% 0	5	3.40

Q5 Sewer Feasibility Study A long term feasibility study of possible solutions, potential cost, and funding options for future sewer and septic system replacement and repair throughout the county. Concern over pollution from failing sewer systems was an issue raised in the citizen survey.

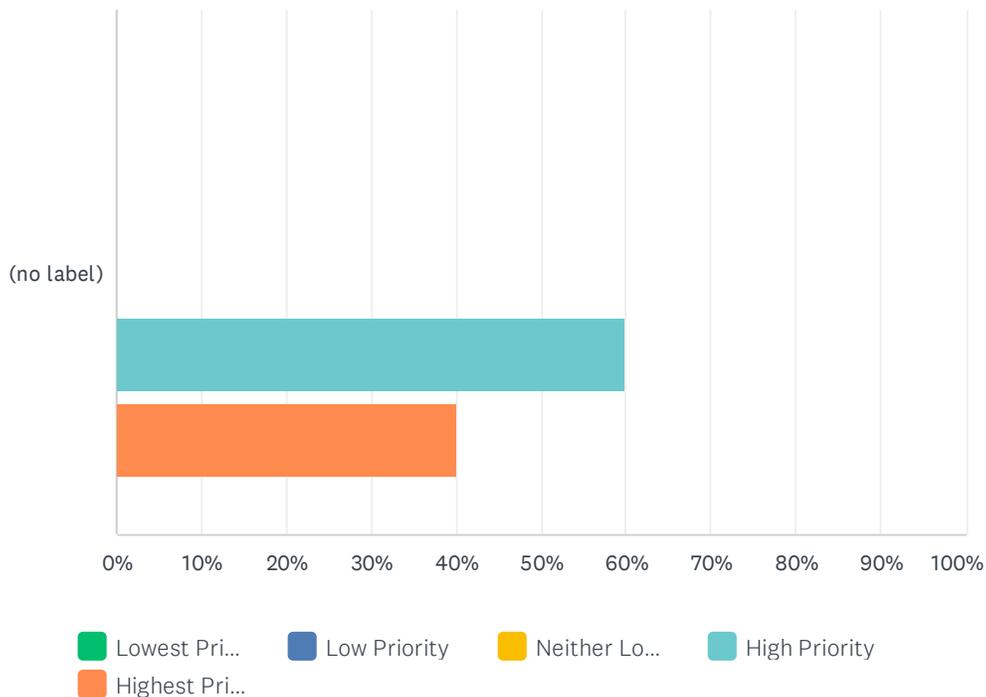
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	20.00% 1	20.00% 1	40.00% 2	0.00% 0	20.00% 1	5	2.80

Q6 Storm Drainage Maintenance (Ditch Maintenance) Work with private landowners and NCDOT to ensure maintenance of drainage ditches and maximize the capability of existing drainage systems and minimize flooding from rainfall and poor drainage. The county has made a significant effort but does not have a permanent funding source. This was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 4 and was identified as a common concern in the citizen survey.

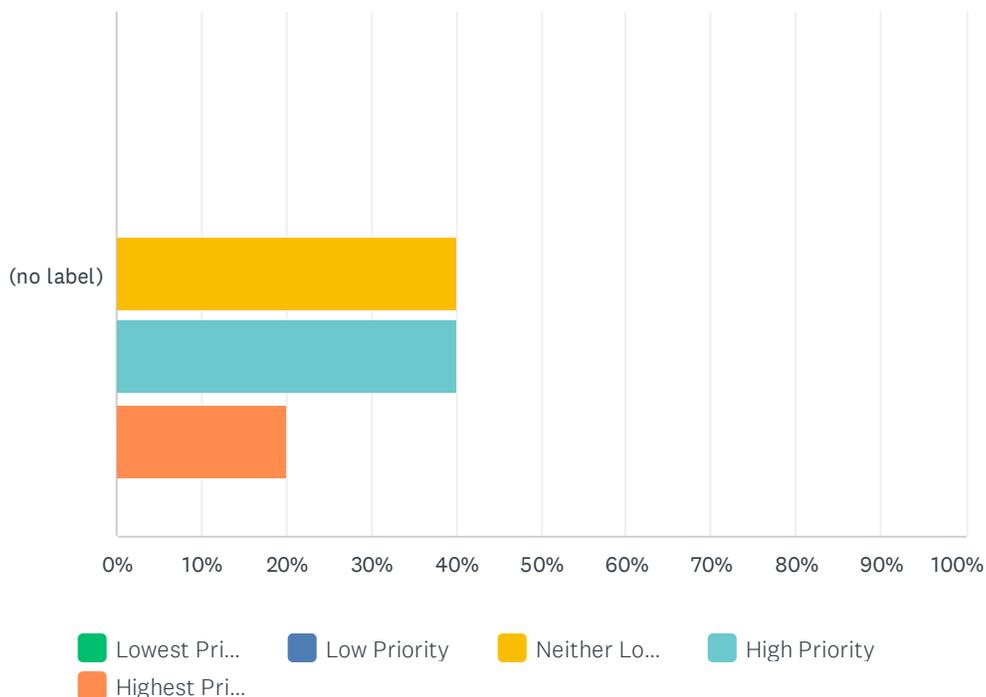
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	0.00% 0	60.00% 3	40.00% 2	5	4.40

Q7 Public Education and Outreach ProgramA targeted education and outreach program regarding the benefit of natural areas and flood risk, preparedness, insurance and mitigation. The Outer Banks Hazard Mitigation Plan and Currituck County Resilient Redevelopment Plan both had public education and outreach actions.

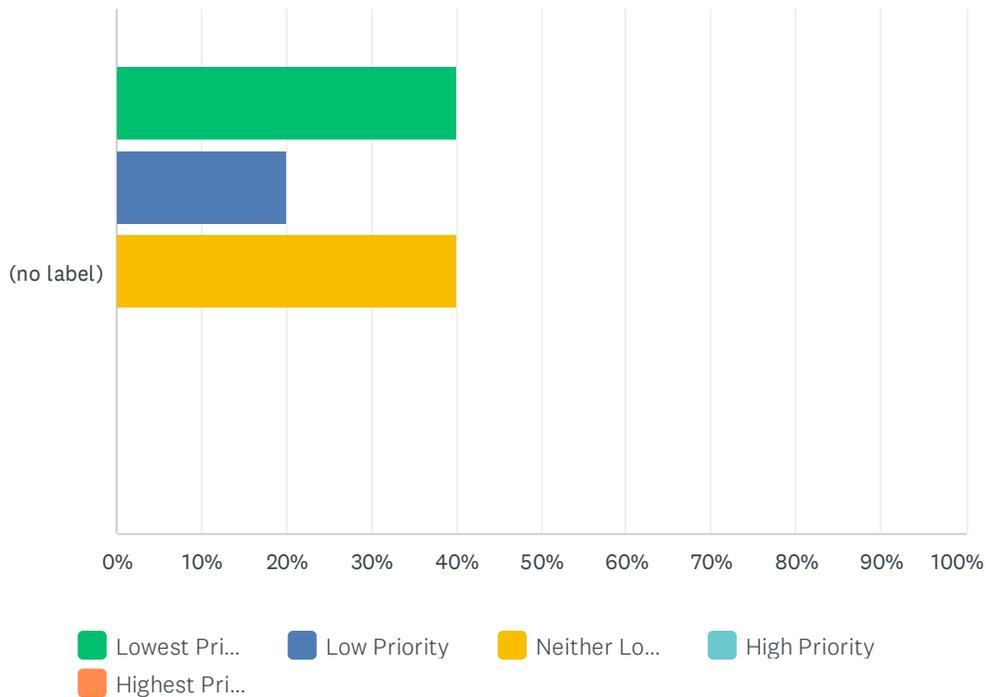
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	40.00% 2	40.00% 2	20.00% 1	5	3.80

Q8 Elevate Structures Establish a grant program to provide assistance to elevate structures and homes that are currently below the BFE or are repetitive loss properties, to meet current ordinance requirements and protect against flooding and sea level rise.

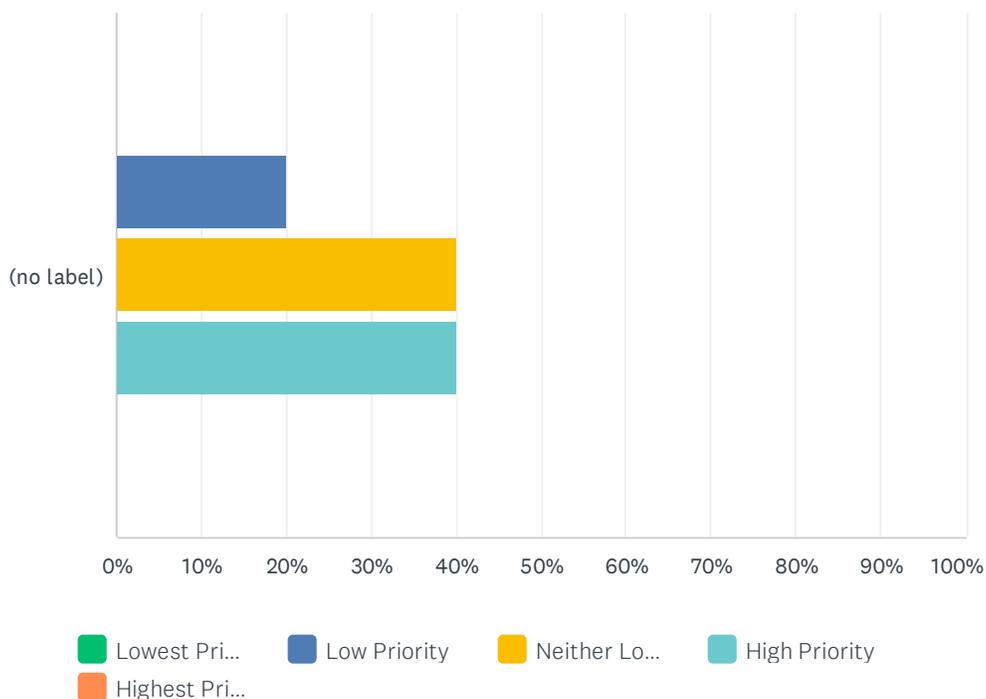
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	40.00% 2	20.00% 1	40.00% 2	0.00% 0	0.00% 0	5	2.00

Q9 Outer Banks Outfalls This project was identified in the Currituck County Resilient Redevelopment Plan as Economic Development Action 1. "This project would allow the County to acquire portable generators and a portable stormwater pump station to assist in removing stormwater from these areas. The County would also install permanent outfall pipes to the Atlantic Ocean; acquire easements on private property to locate the portable pump when needed. The County would also acquire a Coastal Area Management Act (CAMA) major permit to install the outfalls. These outfalls would be capped on both ends during normal conditions and used only in an emergency when the State permits pumping to the ocean."

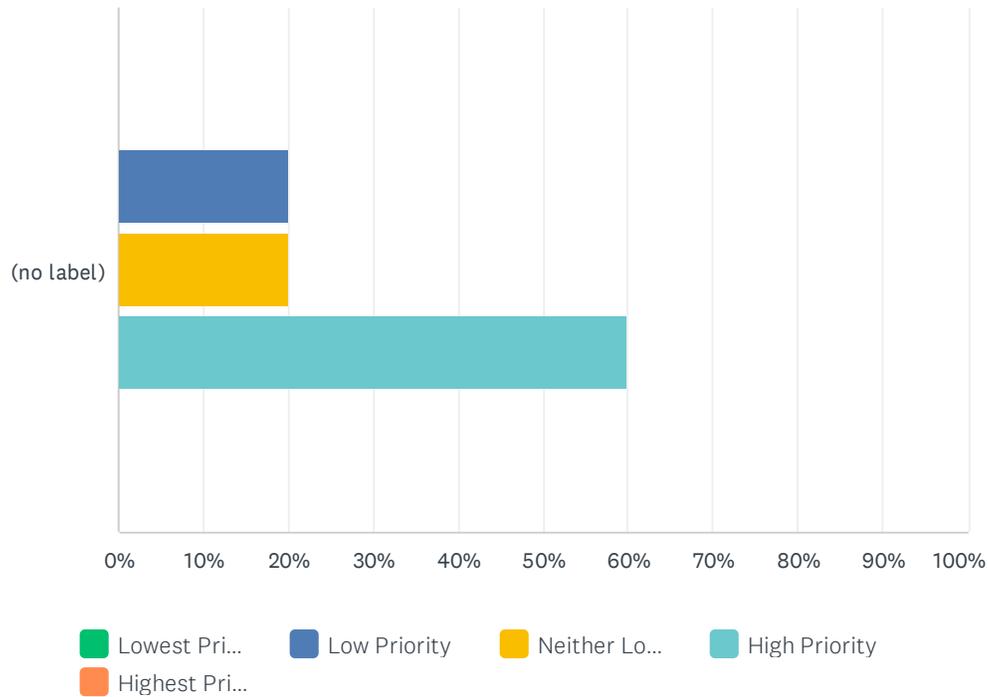
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	20.00% 1	40.00% 2	40.00% 2	0.00% 0	5	3.20

Q10 Waterlily Road Improvements StudyA study to evaluate alternatives for elevating Waterlily Road to reduce risk of being inundated during flood events. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 3 and the project area was identified as a hot spot in the citizen survey.

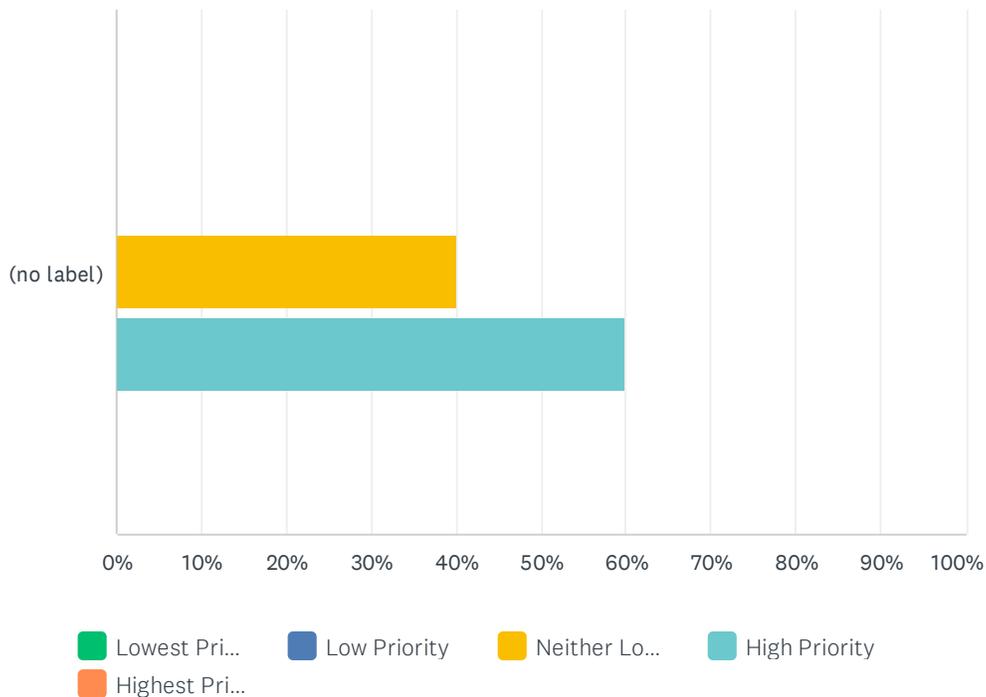
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	20.00% 1	20.00% 1	60.00% 3	0.00% 0	5	3.40

Q11 Bells Island Road Improvements StudyA study to evaluate alternatives for elevating Bells Island Road to reduce risk of being inundated during flood events. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4 and the project area was identified as a hot spot in the citizen survey.

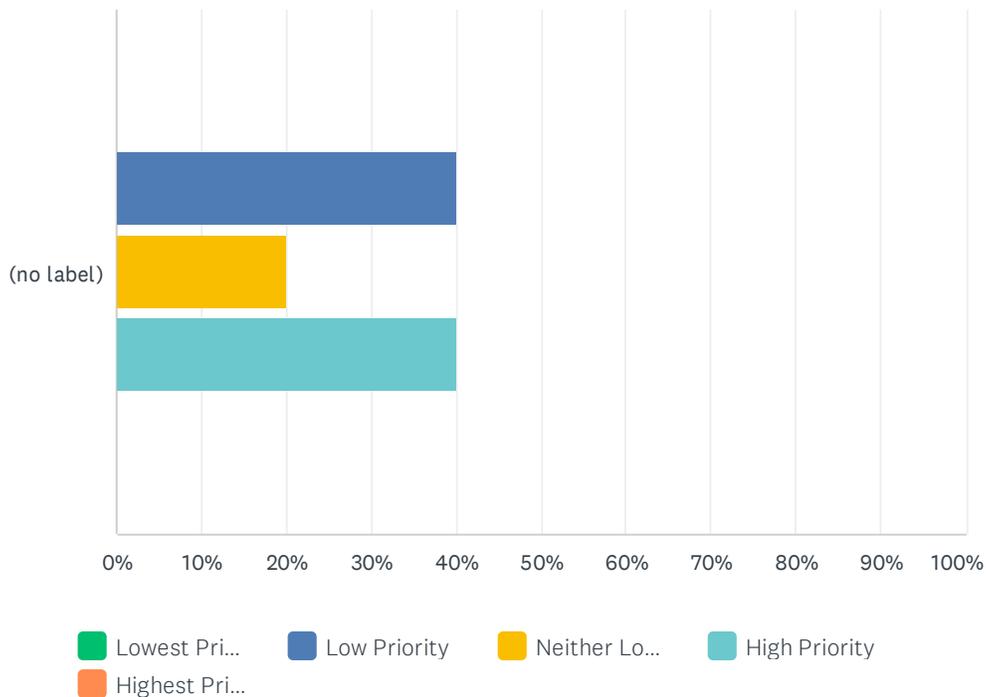
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	40.00% 2	60.00% 3	0.00% 0	5	3.60

Q12 Knotts Island Marsh Causeway Improvements Study A study to evaluate alternatives for elevating Marsh Causeway to reduce risk of being inundated during flood events. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4 and the project area was identified as a hot spot in the citizen survey.

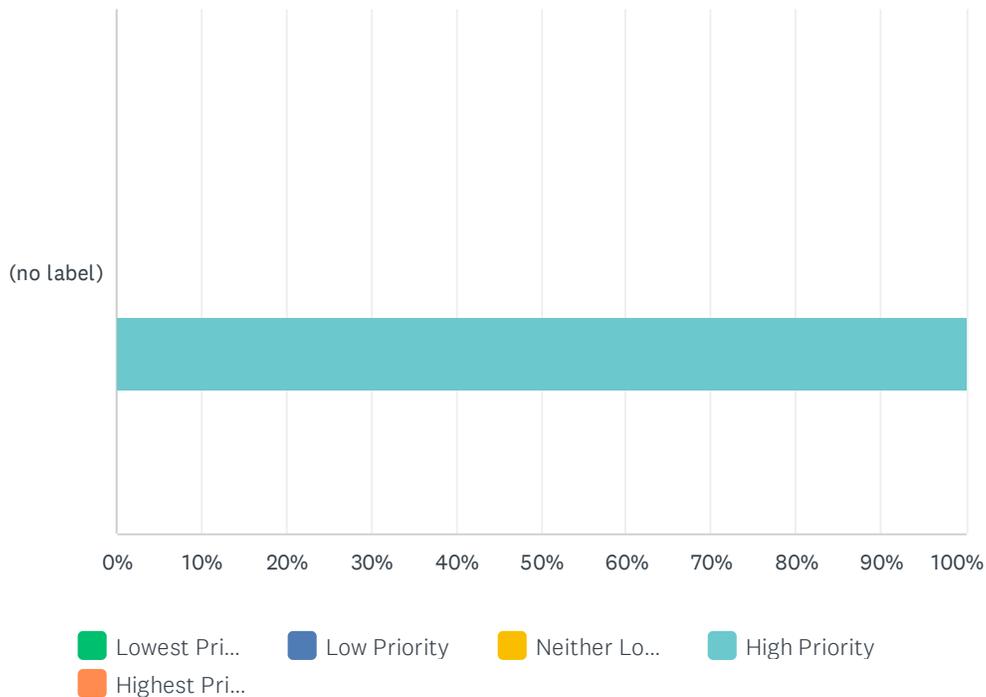
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	40.00% 2	20.00% 1	40.00% 2	0.00% 0	5	3.00

Q13 Tulls Creek Road Area Improvements StudyA study to evaluate roadway and drainage improvements on Tulls Creek Road, Old Tulls Creek Road, and Rocky Top Road to reduce risk of roads being inundated for extended periods. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4 and the project area was identified as a hot spot in the citizen survey.

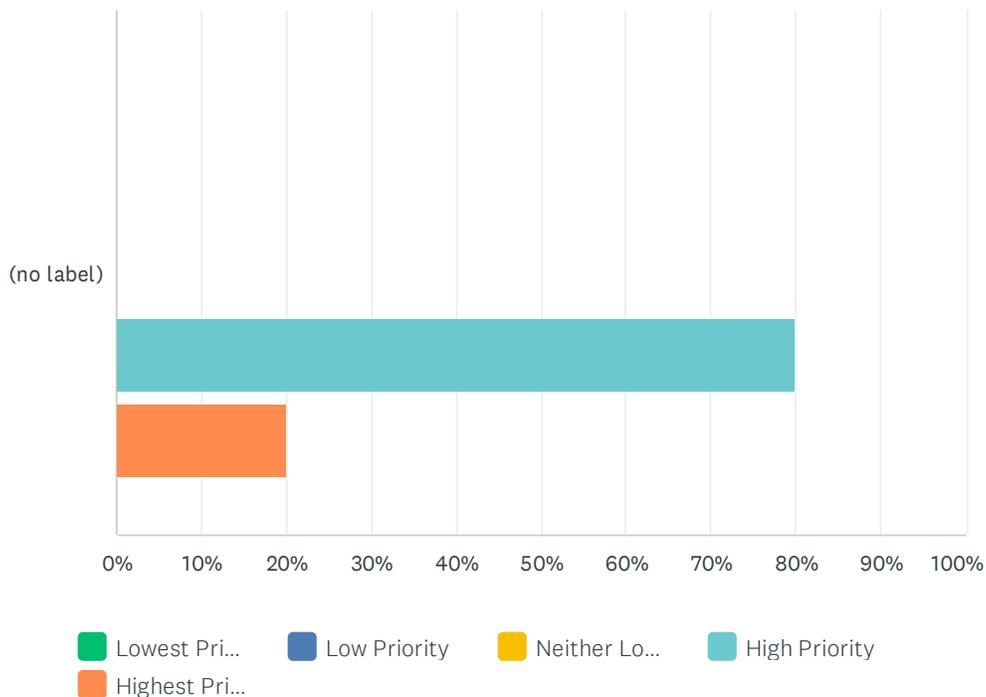
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	0.00% 0	100.00% 5	0.00% 0	5	4.00

Q14 Moyock Area Drainage StudyA drainage study for the Moyock area west of NC 168 to identify improvements that could reduce flood damage to surrounding areas. Drainages to be included in this study include: Eagle Creek, Western Canal, and Roland Creek Canals; Moyock Service District ditches #1-6; Ranchland drainage; Baxter Lane Ditch; Newtown Area Ditches; Survey Road ditch to Roland Creek; Summit Farms culvert and ditches; and NC 168 culverts. This project was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 1 and identified as hot spots in the citizen survey.

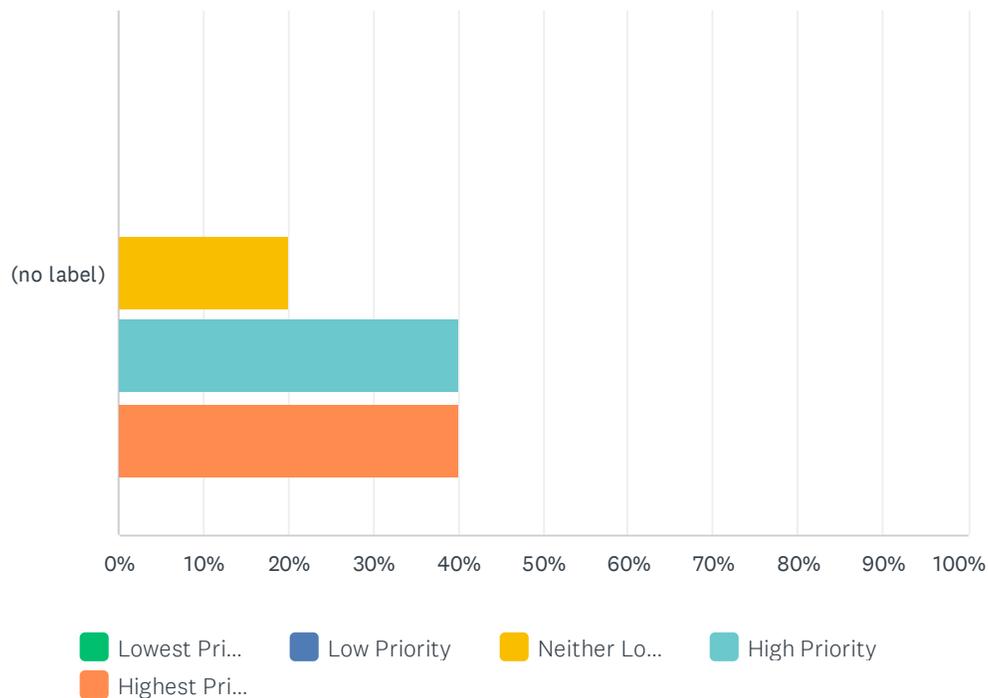
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	0.00% 0	80.00% 4	20.00% 1	5	4.20

Q15 Guinea Mill Run Drainage Improvements - Culvert and Channel Modifications
 This project works to improve drainage in the Guinea Mill Run watershed outside of Moyock. This area was identified as a hot spot in the citizen survey. The Guinea Mill Run Hydrology and Hydraulics study completed by the US Army Corps of Engineers recommended "Improvement Plan 3." This plan included clearing and snagging of all the canals, modification of culvert structures and channel modification of Guinea Mill Run Canal.

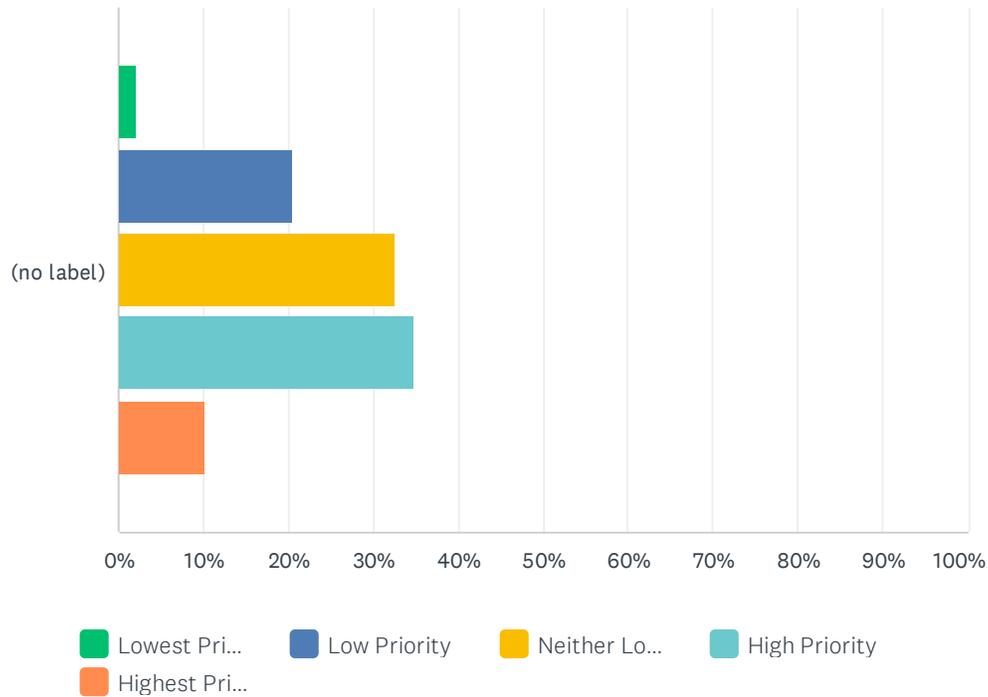
Answered: 5 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	20.00% 1	40.00% 2	40.00% 2	5	4.20

Q1 Stormwater Pump Stations Installation of three stormwater pump stations to reduce flooding from stormwater in canals at Ranchland Drive and Green View Road/Eagle Creek subdivision at the crossing of NC 168. This project was identified in the Currituck County Resilient Redevelopment Plan as Housing Action 2.

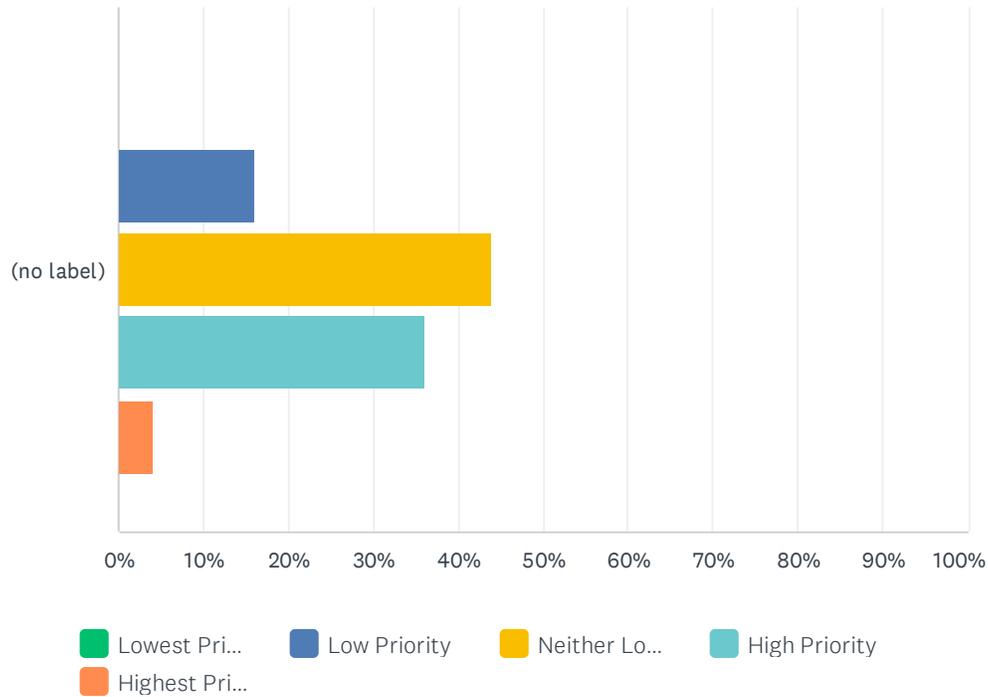
Answered: 49 Skipped: 1



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	2.04%	20.41%	32.65%	34.69%	10.20%	49	3.31
	1	10	16	17	5		

Q2 Marsh Sill and Shoreline Restoration - Coinjock Bay Marsh Sills at 3581 Caratoke Hwy - a marsh sill and shoreline restoration at this location serves to protect the roadway and has the potential to be developed as a public water access. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds.

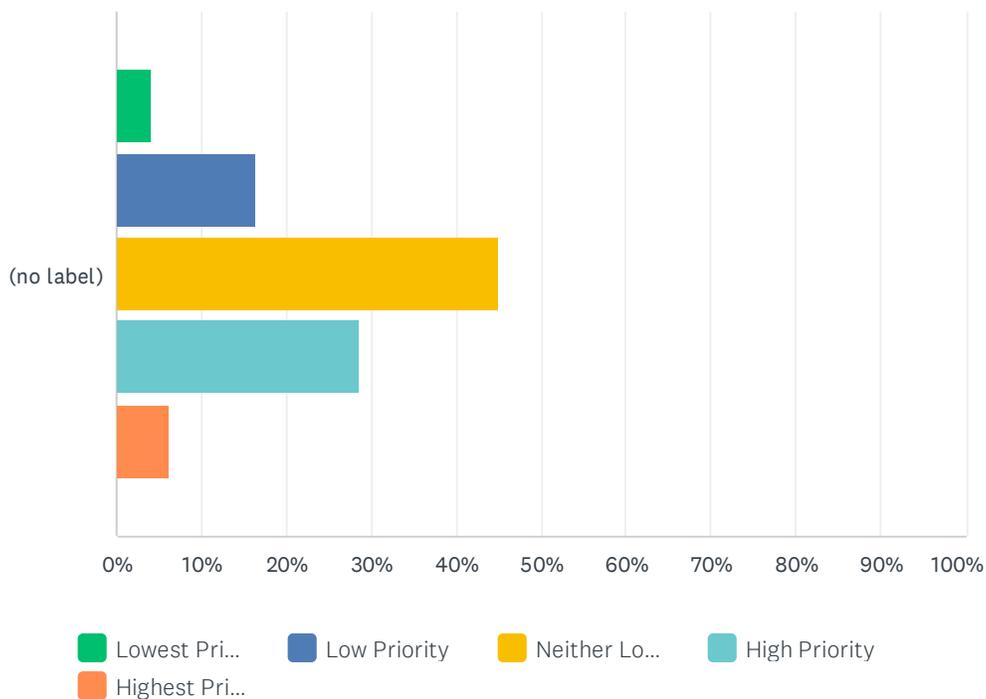
Answered: 50 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	16.00% 8	44.00% 22	36.00% 18	4.00% 2	50	3.28

Q3 Marsh Sills - Tulls Creek Rd Marsh sills at 1485 Tulls Creek Rd - a marsh sill at this location serves to protect the roadway and additional water quality benefits. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds.

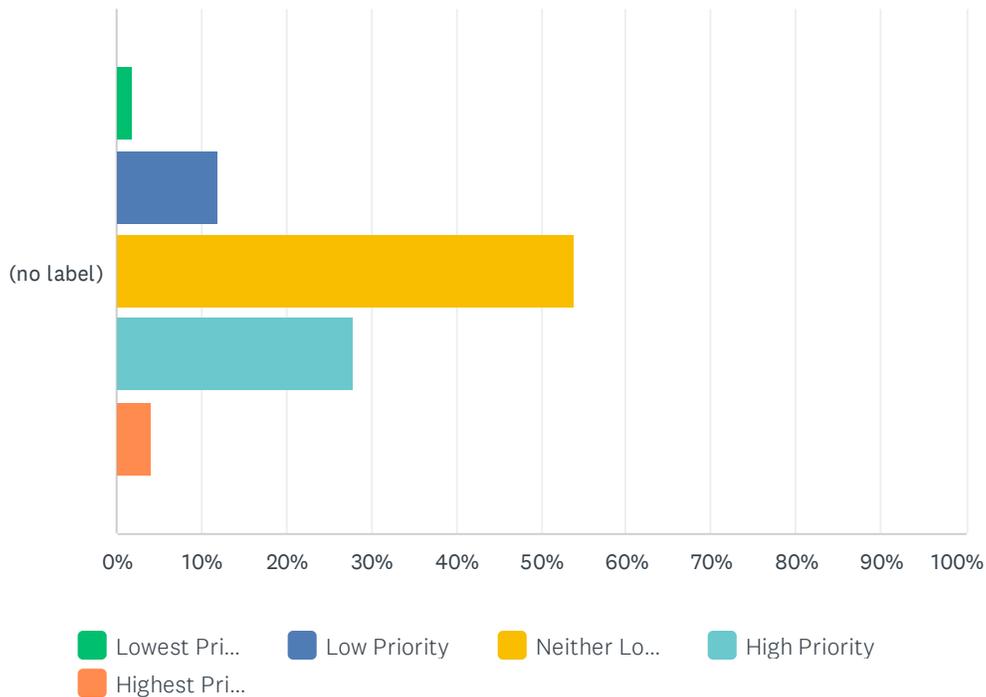
Answered: 49 Skipped: 1



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	4.08% 2	16.33% 8	44.90% 22	28.57% 14	6.12% 3	49	3.16

Q4 Bells Island Road Shoreline Protection A living shoreline at this location serves to protect the roadway which was identified as a hot spot in the citizen survey. This project was identified in the Draft Narrative Water Quality Monitoring and Remediation - Currituck Sounds Watersheds.

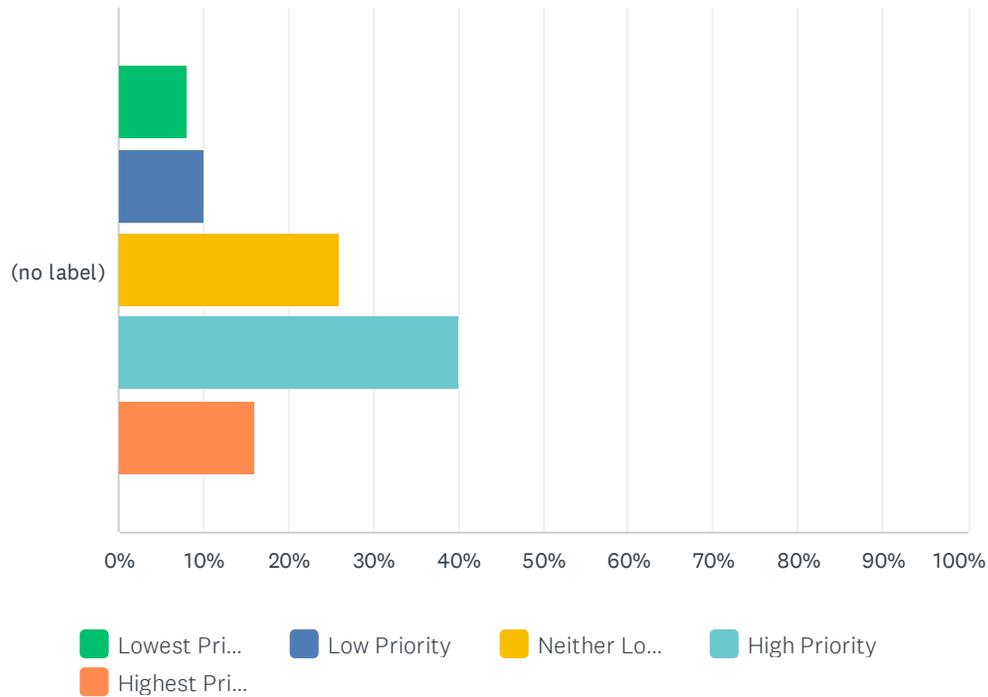
Answered: 50 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	2.00%	12.00%	54.00%	28.00%	4.00%	50	3.20
	1	6	27	14	2		

Q5 Sewer Feasibility Study A long term feasibility study of possible solutions, potential cost, and funding options for future sewer and septic system replacement and repair throughout the county. Concern over pollution from failing sewer systems was an issue raised in the citizen survey.

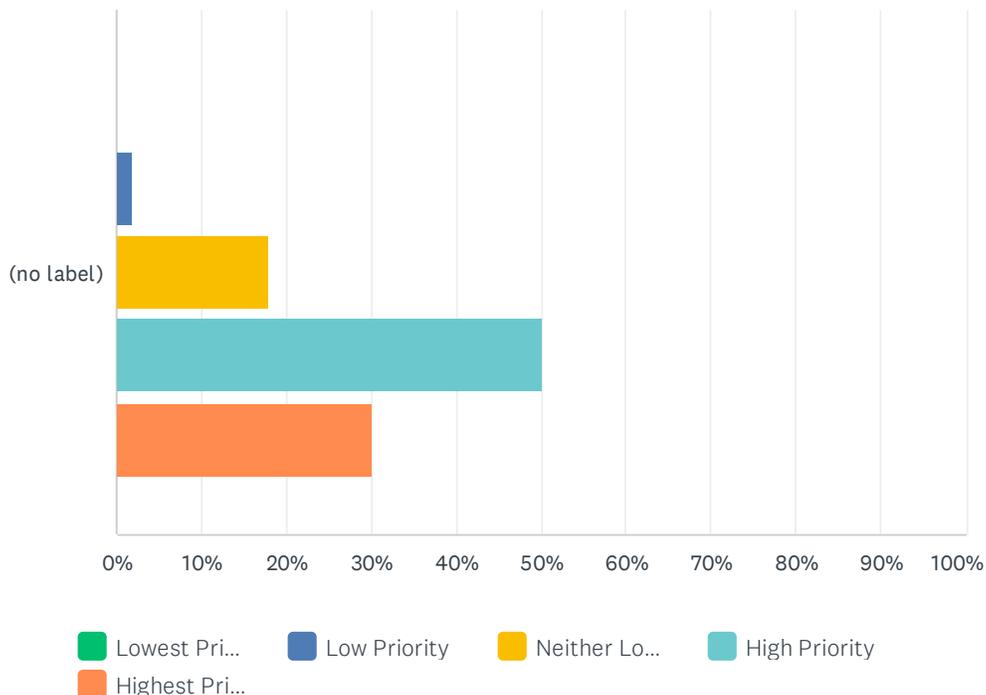
Answered: 50 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	8.00% 4	10.00% 5	26.00% 13	40.00% 20	16.00% 8	50	3.46

Q6 Storm Drainage Maintenance (Ditch Maintenance) Work with private landowners and NCDOT to ensure maintenance of drainage ditches and maximize the capability of existing drainage systems and minimize flooding from rainfall and poor drainage. The county has made a significant effort but does not have a permanent funding source. This was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 4 and was identified as a common concern in the citizen survey.

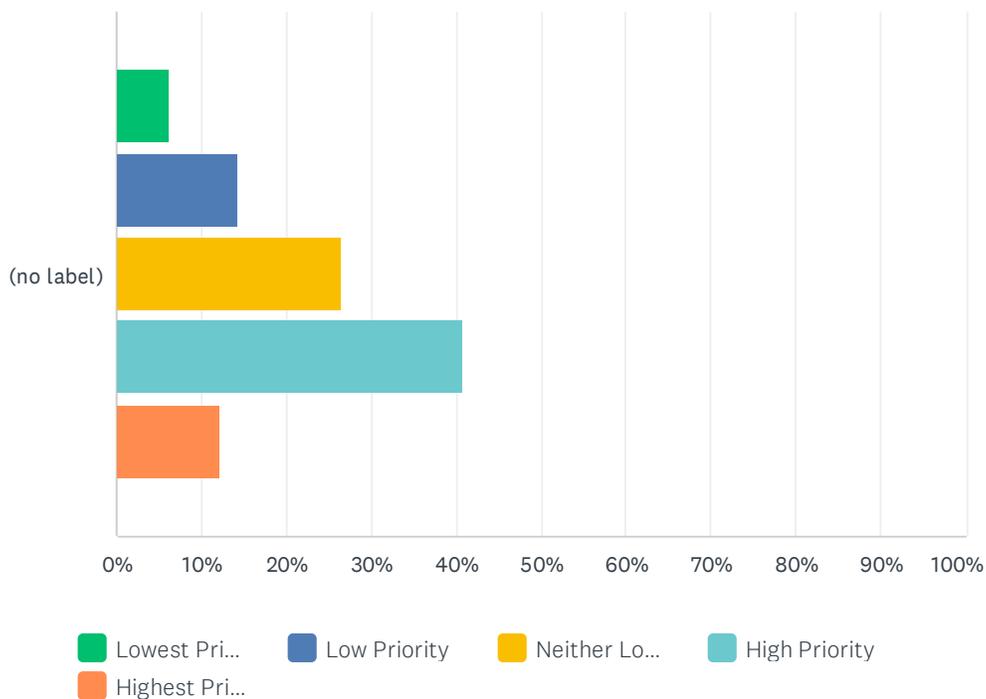
Answered: 50 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	2.00% 1	18.00% 9	50.00% 25	30.00% 15	50	4.08

Q7 Public Education and Outreach ProgramA targeted education and outreach program regarding the benefit of natural areas and flood risk, preparedness, insurance and mitigation. The Outer Banks Hazard Mitigation Plan and Currituck County Resilient Redevelopment Plan both had public education and outreach actions.

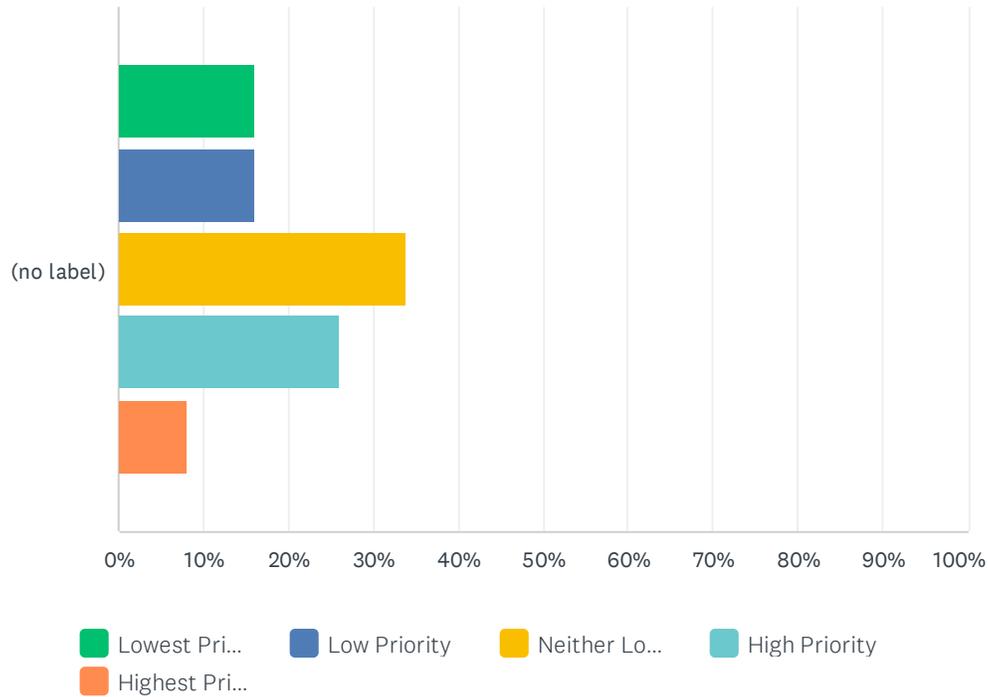
Answered: 49 Skipped: 1



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	6.12% 3	14.29% 7	26.53% 13	40.82% 20	12.24% 6	49	3.39

Q8 Elevate Structures Establish a grant program to provide assistance to elevate structures and homes that are currently below the BFE or are repetitive loss properties, to meet current ordinance requirements and protect against flooding and sea level rise.

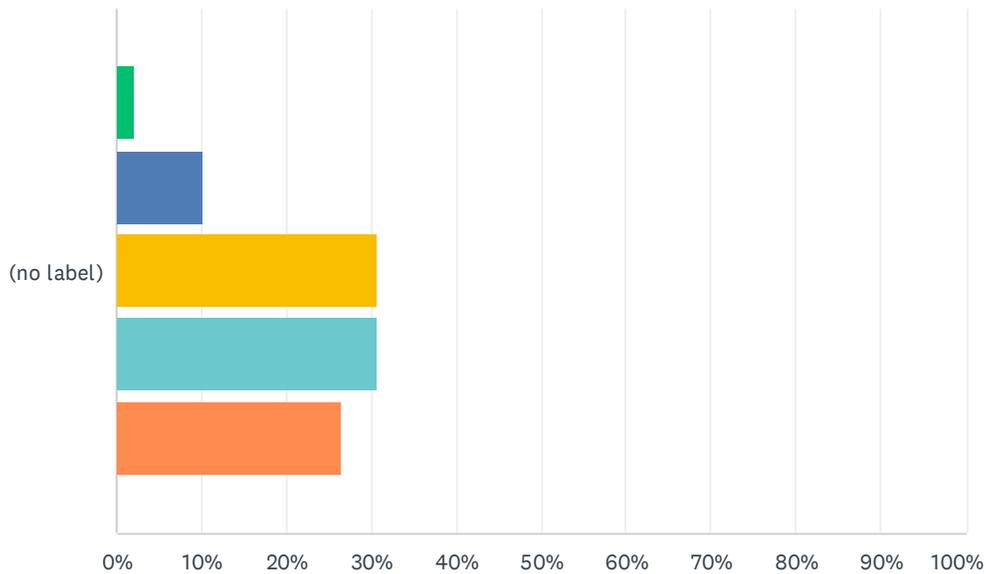
Answered: 50 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	16.00% 8	16.00% 8	34.00% 17	26.00% 13	8.00% 4	50	2.94

Q9 Outer Banks Outfalls This project was identified in the Currituck County Resilient Redevelopment Plan as Economic Development Action 1. "This project would allow the County to acquire portable generators and a portable stormwater pump station to assist in removing stormwater from these areas. The County would also install permanent outfall pipes to the Atlantic Ocean; acquire easements on private property to locate the portable pump when needed. The County would also acquire a Coastal Area Management Act (CAMA) major permit to install the outfalls. These outfalls would be capped on both ends during normal conditions and used only in an emergency when the State permits pumping to the ocean."

Answered: 49 Skipped: 1

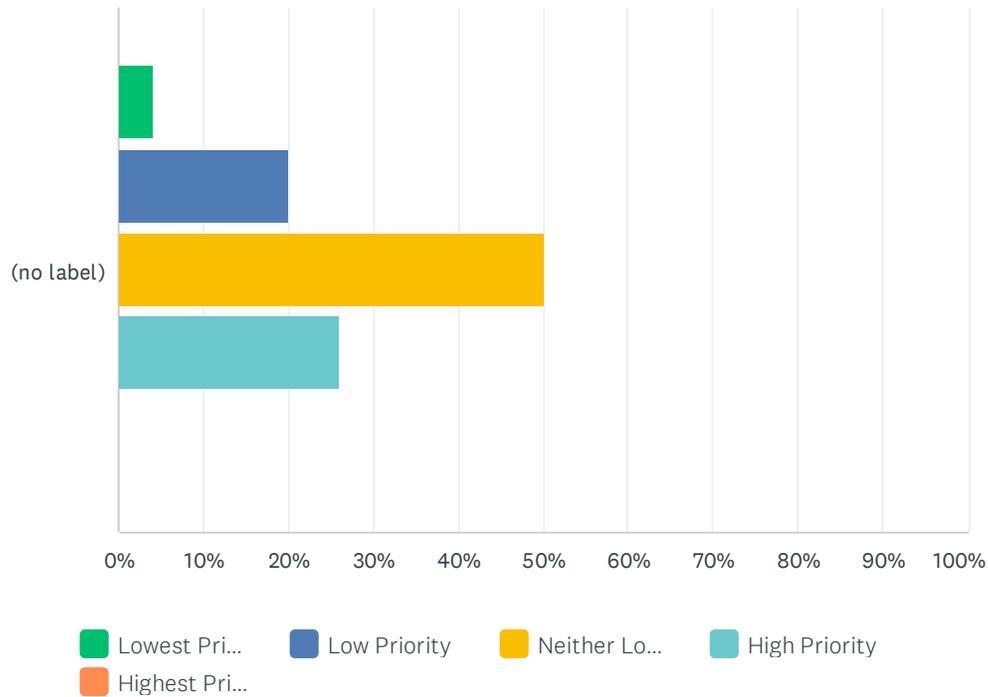


■ Lowest Pri...
 ■ Low Priority
 ■ Neither Lo...
 ■ High Priority
 ■ Highest Pri...

	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	2.04%	10.20%	30.61%	30.61%	26.53%	49	3.69
	1	5	15	15	13		

Q10 Waterlily Road Improvements StudyA study to evaluate alternatives for elevating Waterlily Road to reduce risk of being inundated during flood events. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 3 and the project area was identified as a hot spot in the citizen survey.

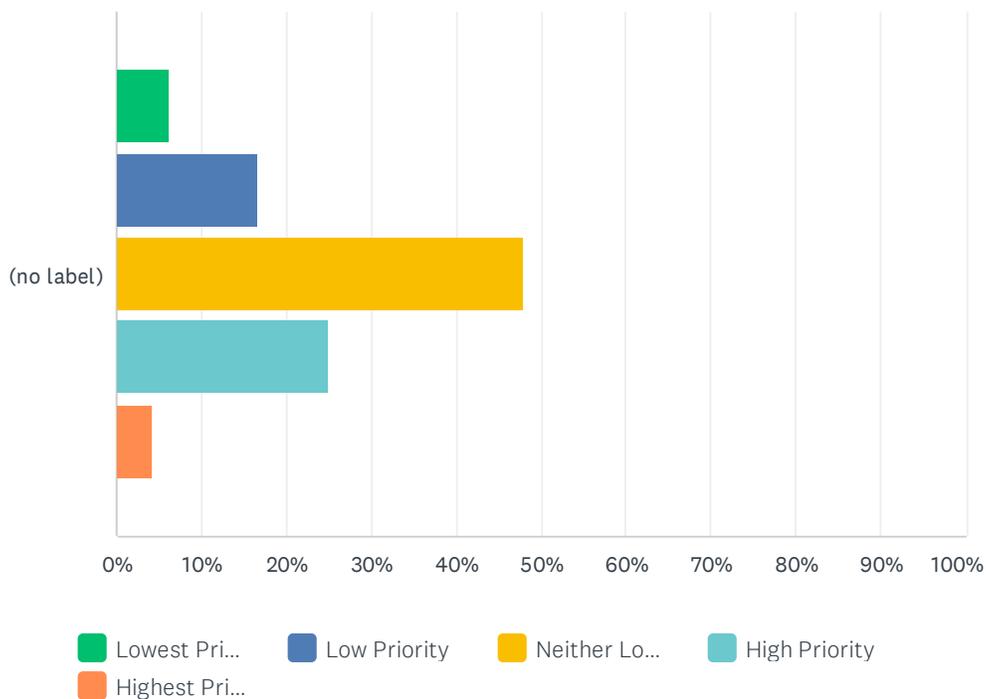
Answered: 50 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	4.00% 2	20.00% 10	50.00% 25	26.00% 13	0.00% 0	50	2.98

Q11 Bells Island Road Improvements StudyA study to evaluate alternatives for elevating Bells Island Road to reduce risk of being inundated during flood events. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4 and the project area was identified as a hot spot in the citizen survey.

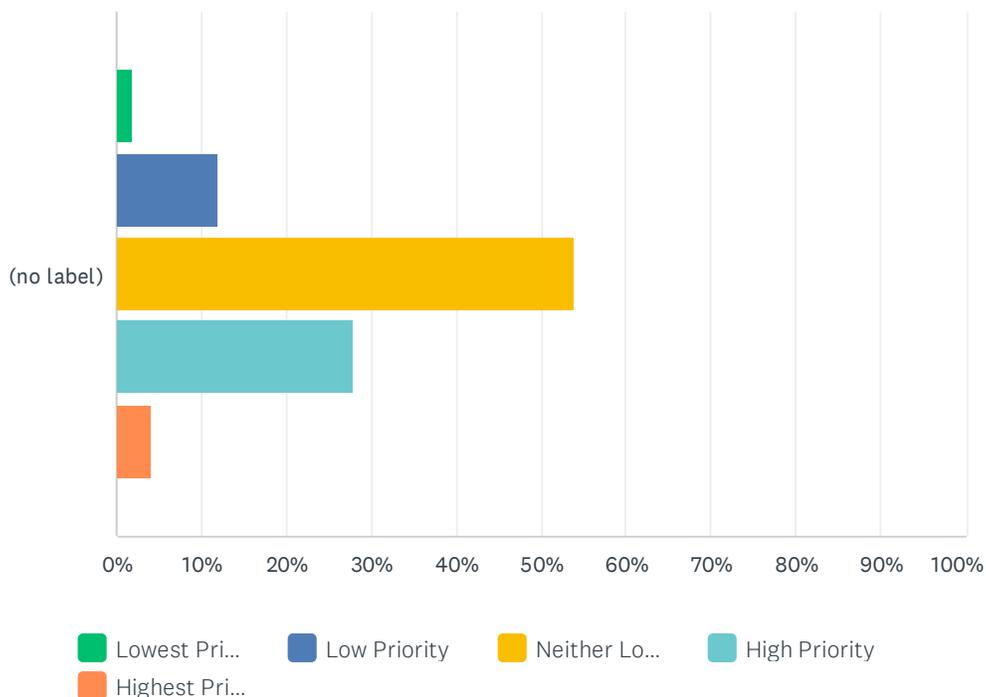
Answered: 48 Skipped: 2



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	6.25% 3	16.67% 8	47.92% 23	25.00% 12	4.17% 2	48	3.04

Q12 Knotts Island Marsh Causeway Improvements Study A study to evaluate alternatives for elevating Marsh Causeway to reduce risk of being inundated during flood events. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4 and the project area was identified as a hot spot in the citizen survey.

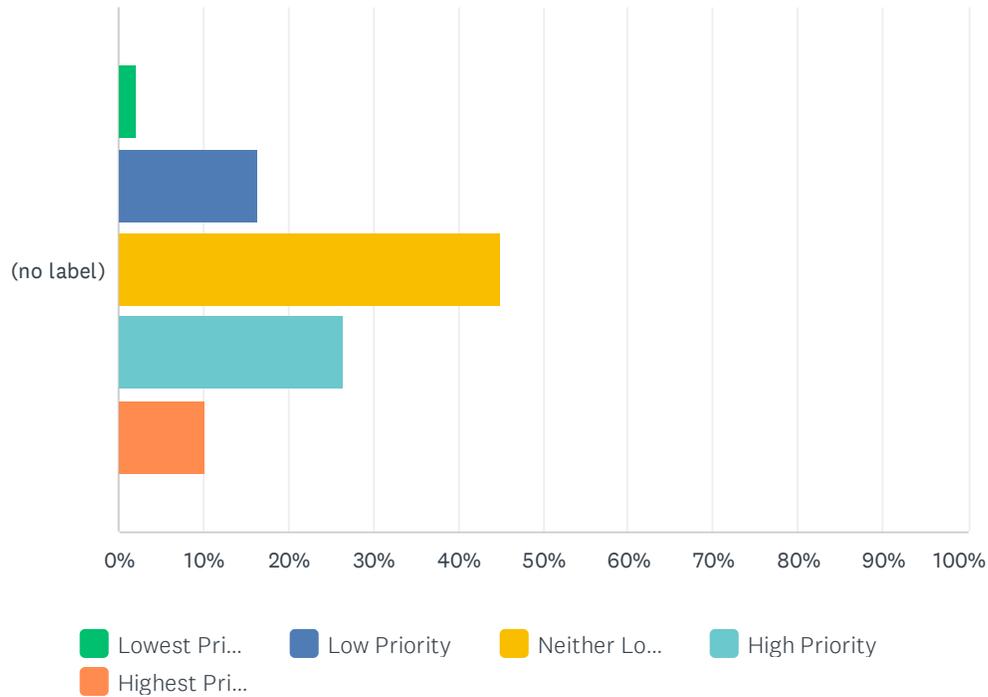
Answered: 50 Skipped: 0



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	2.00% 1	12.00% 6	54.00% 27	28.00% 14	4.00% 2	50	3.20

Q13 Tulls Creek Road Area Improvements StudyA study to evaluate roadway and drainage improvements on Tulls Creek Road, Old Tulls Creek Road, and Rocky Top Road to reduce risk of roads being inundated for extended periods. This project was identified in the Currituck County Resilient Redevelopment Plan as Infrastructure Action 4 and the project area was identified as a hot spot in the citizen survey.

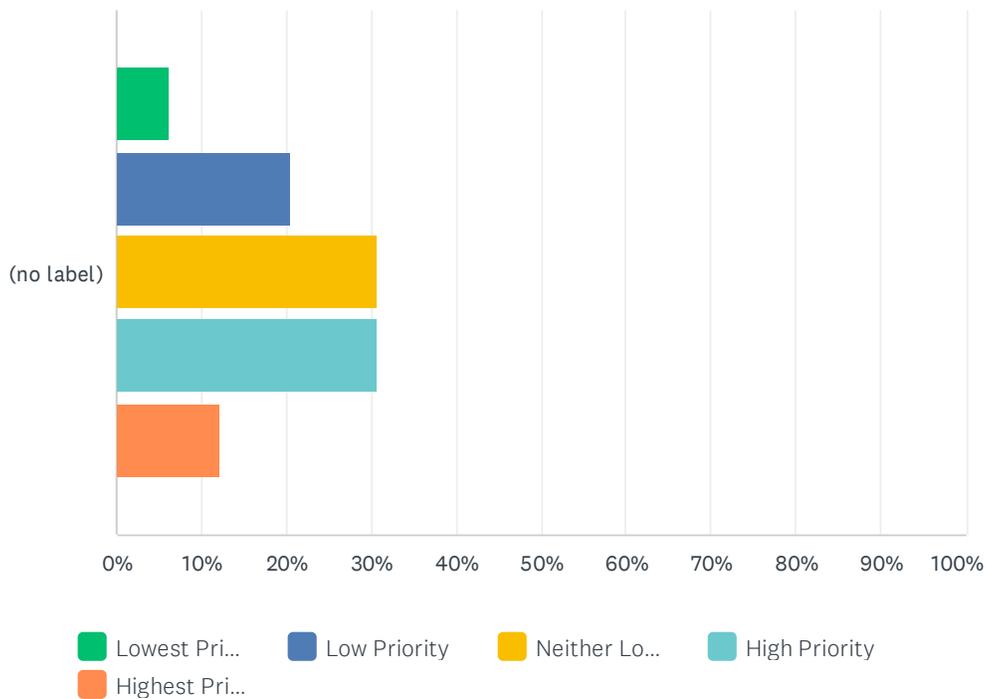
Answered: 49 Skipped: 1



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	2.04%	16.33%	44.90%	26.53%	10.20%	49	3.27
	1	8	22	13	5		

Q14 Moyock Area Drainage StudyA drainage study for the Moyock area west of NC 168 to identify improvements that could reduce flood damage to surrounding areas. Drainages to be included in this study include: Eagle Creek, Western Canal, and Roland Creek Canals; Moyock Service District ditches #1-6; Ranchland drainage; Baxter Lane Ditch; Newtown Area Ditches; Survey Road ditch to Roland Creek; Summit Farms culvert and ditches; and NC 168 culverts. This project was identified in the Currituck County Resilient Redevelopment Plan as Environmental Action 1 and identified as hot spots in the citizen survey.

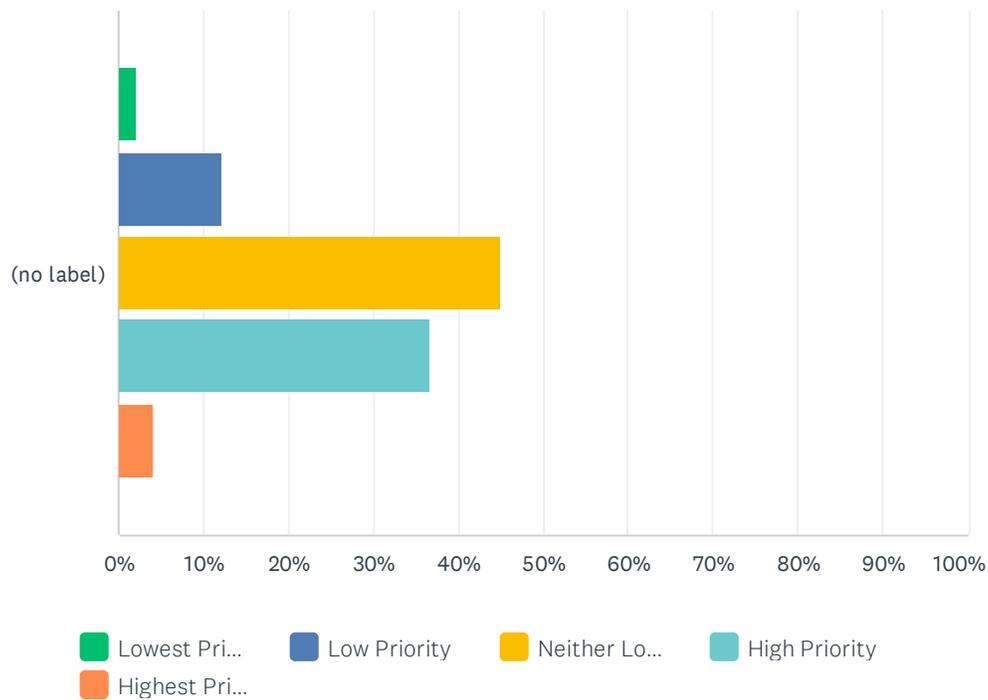
Answered: 49 Skipped: 1



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	6.12%	20.41%	30.61%	30.61%	12.24%	49	3.22
	3	10	15	15	6		

Q15 Guinea Mill Run Drainage Improvements - Culvert and Channel Modifications
 This project works to improve drainage in the Guinea Mill Run watershed outside of Moyock. This area was identified as a hot spot in the citizen survey. The Guinea Mill Run Hydrology and Hydraulics study completed by the US Army Corps of Engineers recommended "Improvement Plan 3." This plan included clearing and snagging of all the canals, modification of culvert structures and channel modification of Guinea Mill Run Canal.

Answered: 49 Skipped: 1



	LOWEST PRIORITY	LOW PRIORITY	NEITHER LOW PRIORITY NOR HIGH PRIORITY	HIGH PRIORITY	HIGHEST PRIORITY	TOTAL	WEIGHTED AVERAGE
(no label)	2.04%	12.24%	44.90%	36.73%	4.08%	49	3.29
	1	6	22	18	2		



Appendix D: Maps

- ◆ National Wetlands Inventory (NWI)
- ◆ Critical Assets
- ◆ FEMA Special Flood Hazard Areas (SFHA)
- ◆ 1ft Sea Level Rise Inundation Areas
- ◆ Storm Surge
- ◆ Erosion Rate - Hatteras Island

FIGURE 1. CRITICAL ASSETS - CURRITUCK COUNTY



FIGURE 2. NATIONAL WETLAND INVENTORY - CURRITUCK COUNTY

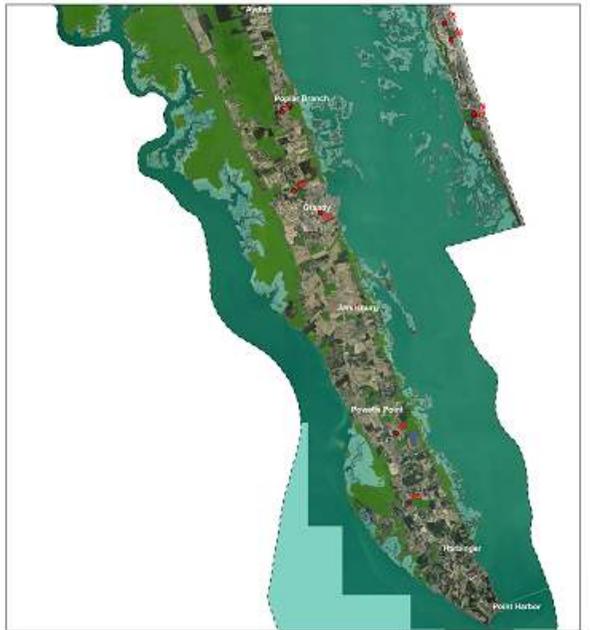


FIGURE 3. SPECIAL FLOOD HAZARD AREAS - CURRITUCK COUNTY

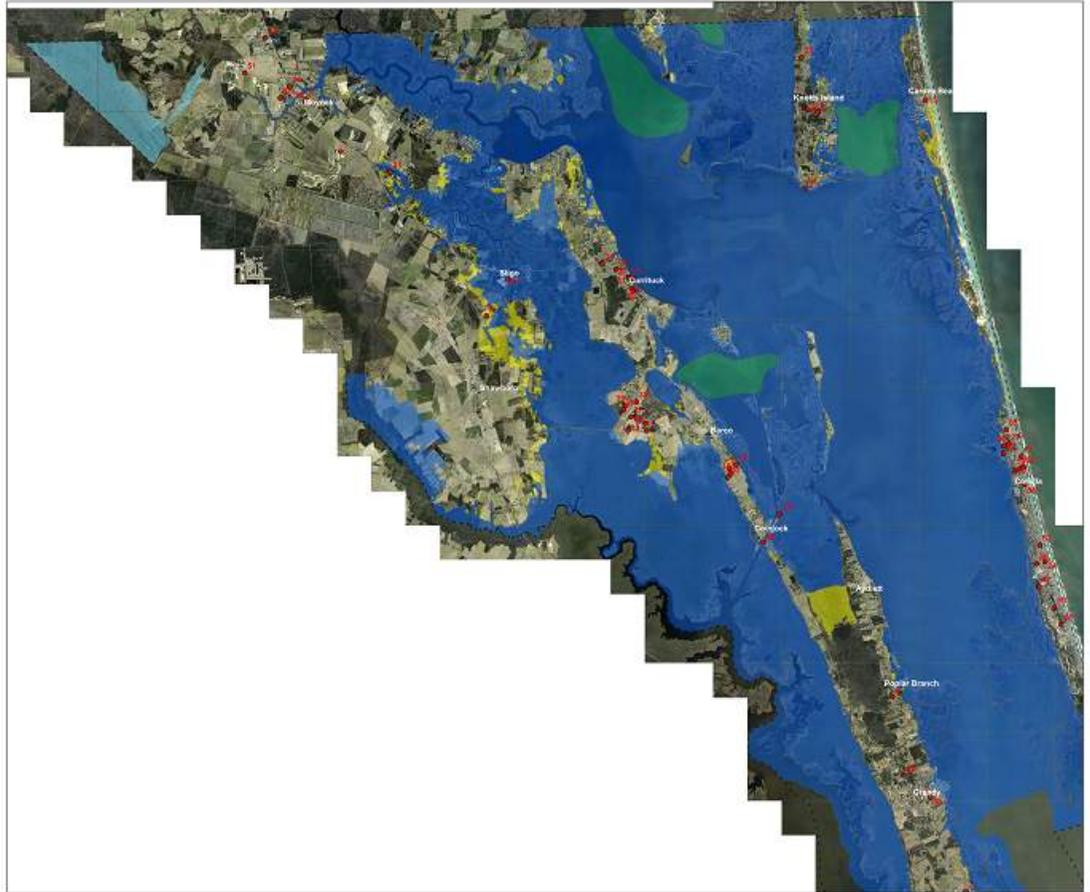


FIGURE 5. STORM SURGE- CURRITUCK COUNTY

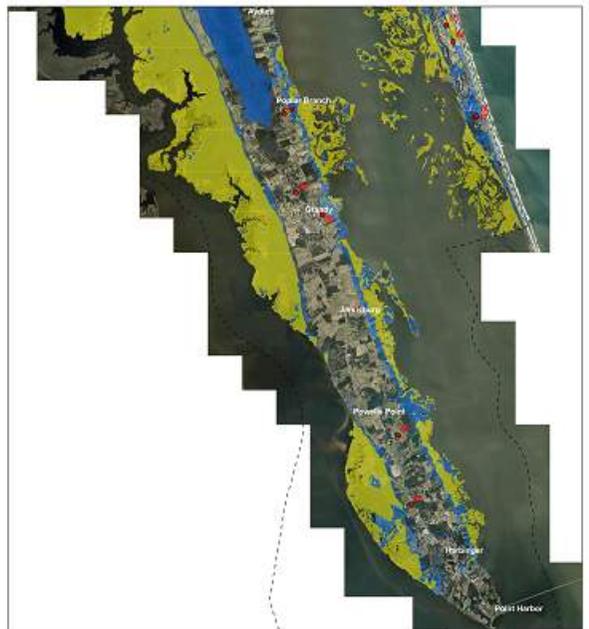
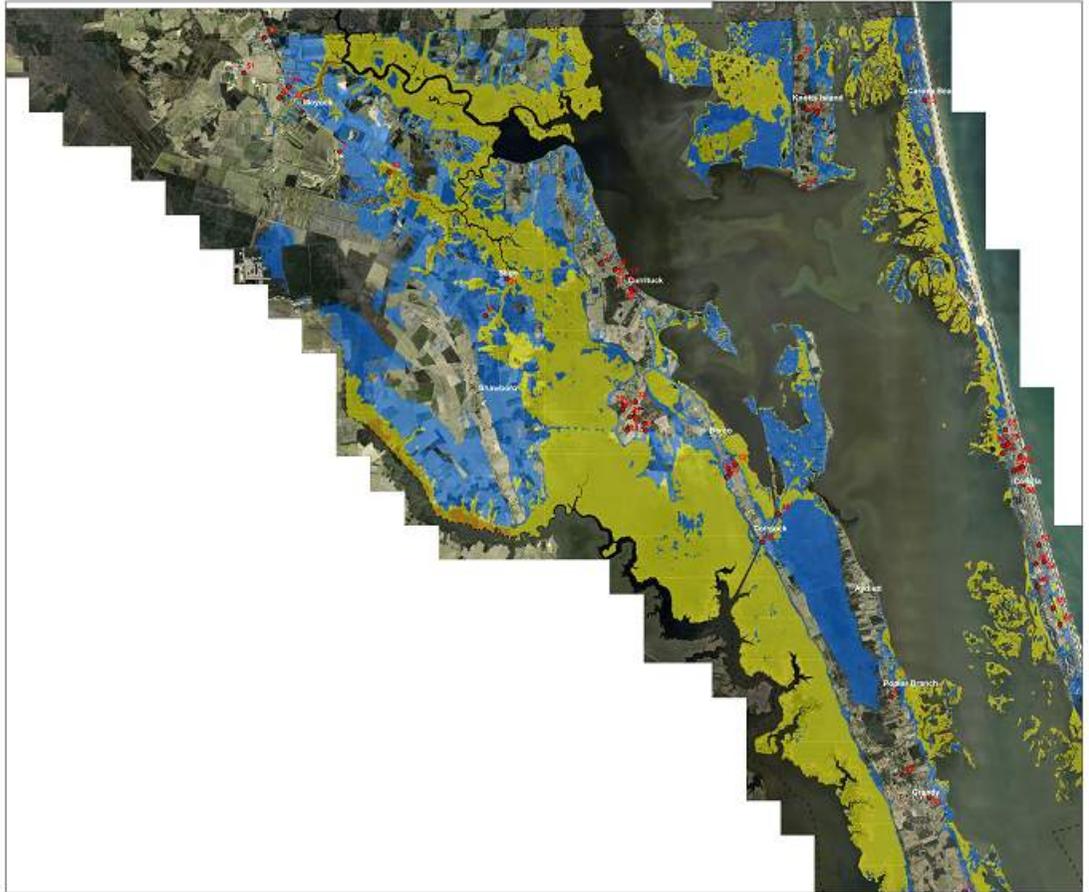


FIGURE 6. EROSION RATES - CURRITUCK COUNTY





Appendix E: CDC Social Vulnerability Index

