



BERTIE COUNTY
106 DUNDEE STREET
POST OFFICE BOX 530
WINDSOR, NORTH CAROLINA 27983
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**BOARD OF
COMMISSIONERS**
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RONALD ROBERSON, Vice Chair
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Statement of Qualifications (SOQ)

County of Bertie, NC

Engineering Services

December 10, 2024

General:

Bertie County is seeking qualified firms to provide engineering services to complete a project prioritization list and Benefit Cost Analysis (BCA) report resulting from a risk and vulnerability assessment of stormwater management alternatives for the Upper Cashie River Basin. These reports will be delivered in accordance with the Scope of Work, Budget and Schedule outlined in the BRIC 2022 Sub-application (EMA – 2022 – BR – 0001 – 0016) titled “Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan “in FEMA GO. This sub application is incorporated into this agreement by reference. This work will include hydrologic modeling, drainage studies, surveys, preliminary engineering designs, cost estimates, permitting, and administration, and other engineering services as needed to prioritize a project list and prepare a BCA report. The project area is in unincorporated portions of Bertie County and does not include any areas located within the municipal area of Windsor.

Bertie County intends to select a qualified consultant to provide engineering services in accordance with the North Carolina General Statutes. Bertie County will be the sole partnering entity on this project. The firms interested should submit Statements of Qualification to the mailing address identified below, and in accordance to the instructions and guidance provided for herein. Each submission package should include:

- one original
- five copies
- flash drive with a PDF version.

No electronic submissions will be accepted. Bertie County reserves the right to reject any and all proposals in accordance to North Carolina General Statutes. Selection will be based on a combination of project approach, experience in Coastal communities, technical ability, and other factors.

Statements Of Qualifications are due to Bertie County Planning Office, attention Traci White by 3:00PM Thursday January 30. The mailing address is PO Box 530, Windsor, NC 27983. The physical delivery address is 106 Dundee St., Windsor, NC, 27983.

Proposed Scope of Services:

Bertie County is requesting statements of qualification from firms proficient in stormwater management for coastal communities to enter into a consulting contract for engineering services. The consulting firm will perform the work necessary to complete a project priority list and BCA report.

The selected firm will initially proceed with assisting the County with a drainage study including but not limited to hydrological modeling of the Upper Cashie River Basin which can be used to prioritize projects and complete the BCA.

Format for Statement of Qualifications:

Each SOQ submitted in response to this solicitation should address the following elements:

- a brief description of the firm and its program of services
- the project team and the individual qualifications and experiences for each of the members of the team
- a list of recent project experience, highlighting any prior experience designing and implementing storm or water projects and with nature basis stormwater solutions. Each project list must have client contact information.
- A description of the firm's specific project results in reference to schedule and projected final cost for selected projects identified in the scope of services
- experience in delivering stormwater projects funded by grants, and hosting public meetings before and during the project to ensure community involvement
- an explanation of the consultant's approach to addressing the proposed scope of services outlined in this document
- references

Statements of Qualification will be evaluated based on the above elements utilizing the scoring form on the following page.

SOQ Delivery and for further information:

Traci White Director of Planning Bertie County
106 Dundee Street
2nd Floor Planning Office
Windsor, NC 27983
(252) 794 – 5336
Traci.white@bertie.nc.gov

County of Bertie Evaluation Scoring Form

Firm Name: _____

Criteria	Weight(a)	Score(b)	Total (a)x(b)
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Quality of Statement of Qualifications:	10%	_____	_____
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- SOQ is presented in a professional manner
- SOQ includes all required components as listed in the RFQ
- SOQ demonstrates the ability to successfully provide the requested services

Methodology and General Approach:	25%	_____	_____
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- Scope and Discipline Understanding
- SOQ provides logical and understandable sequence of activities
- SOQ demonstrates the ability to work with the county as a team to complete the project

Applicable Experience and Reference of the Firm:	25%	_____	_____
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- SOQ describes examples of experience with similar projects
- SOQ provides reference for similar work

Project Team Qualifications:	20%	_____	_____
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- Firm/team members demonstrate previous governmental experience
- team members can handle all aspects of the work in the scope

Response and Completion Time:	20%	_____	_____
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- SOQ demonstrates firm's ability to respond to the county in a timely manner
- SOQ describes the firm's plan to complete the project in an efficient manner to meet deadlines

Final Score

Score Points: 1 (does not meet expectation) to 5 (exceeds expectation)

Reviewer: _____

Date: _____

Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Subapplicant information

Name of federal agency **FEMA**

Type of submission **Application**

BERTIE COUNTY MANAGERS OFFICE

106 DUNDEE ST STE 201

WINDSOR, NC 27983 United States

State	UEI-EFT	DUNS #	EIN #
NC	FSW9MGNZAK39	032848574	566000276

Subapplicant type **Local Government**

Is the subapplicant subject to review by Executive Order 12372 Process? **No - Not selected**

Is the subapplicant delinquent on any federal debt? **No**

Continue

Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Contact information

Subrecipient Authorized Representative (SAR)

<p>Lisa Williams</p> <p>lwilliams@mideastcom.org</p>	<p>Primary phone 2524028609 Work</p>	<p>Mailing address</p>
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Point(s) of contact

<p>Lisa Williams Disaster Recovery Coordinator</p> <p>lwilliams@mideastcom.org</p>	<p>Primary phone 2524028609 Work</p> <p>Fax</p>	<p>Additional phones 2529741843 Work</p>	<p>Mailing address 1502 N Market Street Washington NC 27889</p>
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Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Community

Please provide the following information. If the Congressional district number for your community does not display correctly, please contact your State NFIP coordinator.

Add Communities

Please find the community(ies) that will benefit from this mitigation activity by clicking on the Find communities button. If needed, modify the Congressional District number for each community by entering the updated number under the U.S. Congressional District column for that community. When finished, click the Continue button. NOTE: You should also notify your State NFIP coordinator so that the updated U.S. Congressional District number can be updated in the Community Information System (CIS) database.

Community name	County code	CID number	CRS community	CRS rating	U.S. Congressional District
ASKEWVILLE, TOWN OF	015	370029	N		
AULANDER, TOWN OF	015	370018	N		1,2
BERTIE COUNTY*	015	370290	N		1
COLERAIN, TOWN OF	015	370291	N		1,2
KELFORD, TOWN OF	015	370577	N		1
LEWISTON WOODVILLE, TOWN OF	015	370112	N		1
POWELLSVILLE, TOWN OF	015	370292	N		1,2
ROXOBEL, TOWN OF	015	370605	N		1
WINDSOR, TOWN OF	015	370019	N		1,2

Please provide any additional comments below (optional).

Bertie County is one of the largest counties in North Carolina, spanning 741 square miles. It was originally part of Albemarle County, established in 1660. In 1670, Chowan County, including Bertie Precinct, was cut from Albemarle County. Bertie Precinct was finally given status of county in 1722 when it separated from Chowan County. Initially,

Bertie County was comprised of present Bertie County, Tyrrell County, Edgecombe County, Northampton County and Hertford County. By 1780, Bertie County had been divided to resemble its current shape. Bertie County was named for James and Henry Bertie, who had purchased land from the original Lord Proprietors. Bertie County's county seat is Windsor, which was established in 1766 and was made county seat in 1774. The County includes the eight incorporated townships of Askewville, Aulander, Colerain, Kelford, Lewiston-Woodville, Powellsville, Roxobel and Windsor. Bertie County is comprised of fertile uplands and lowlands, with some large swamps called pocosins, making Bertie County ideal for agriculture. In addition, the timber industry is key to the area. Livestock and the growing poultry industry, which focuses on broiler production, are major contributors to Bertie County's agriculture base. Populations (per 2020 census) Population Bertie County 17,934 Town of Askewville 184 Town of Aulander 763 Town of Colerain 217 Town of Kelford 203 Town of Lewiston-Woodville 426 Town of Powellsville 189 Town of Roxobel 187 Town of Windsor 3,582 There are vulnerable populations present, who would potentially experience disproportionate impacts from flooding, for example, 23% of residents are experiencing poverty, 25% of the population is over 65, 65% are people of color, and 19% of those under the age of 65 have a disability. Bertie is a Tier 1 county, meaning it is in the 40% most economically distressed counties in the state, based on unemployment, income, population growth, and per capita property tax base.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
DCI_2020_NC_Zip_code_27983.pdf	11/14/2022	lwilliams@mideastcom.org	Community Attachments	Distressed Communities, Windsor, NC, the largest town, and the county seat for Bertie County.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
<u>CDC-ATSDR Socail Vulnerability Index 2020.pdf</u>	11/14/2022	lwilliams@mideastcom.org	Community Attachments	CDC/ATSDR Social Vulnerability Index 2020	
<u>Bertie County Disadvantaged Communities Impact %.pdf</u>	01/05/2023	lwilliams@mideastcom.org	Community Attachments	Demographic Table Bertie County	

Continue

Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Mitigation plan

Please provide your plan information below.

Is the entity that will benefit from the proposed activity covered by the current FEMA approved multi-hazard mitigation plan in compliance with 44 CFR Part 201? **Yes**

Please provide plan detail

Plan name	Plan type	Plan approval date
Northeastern NC Regional Hazard Mitigation Plan	Local Multijurisdictional Multi-Hazard Mitigation Plan	04/01/2021

Proposed activity description

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Northeastern NC HMP Final Plan_2021.pdf	11/10/2022	lwilliams@mideastcom.org	Mitigation Plan Attachments	No description given.	
Northeastern NC HMP Final Plan_2021.pdf	11/10/2022	lwilliams@mideastcom.org	Mitigation Plan Attachments	No description given.	

Continue

Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Scope of work

The project Scope of Work (SOW) identifies the eligible activity, describes what will be accomplished and explains how the mitigation activity will be implemented. The mitigation activity must be described in sufficient detail to verify the cost estimate. All activities for which funding is requested must be identified in the SOW prior to the close of the application period. FEMA has different requirements for project, planning and management cost SOWs.

Subapplication title (include type of activity and location)

Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Activities

Primary activity type

Planning related activities

Secondary activity type (Optional)

Geographic areas description

The County includes the eight incorporated townships of Askewville, Aulander, Colerain, Kelford, Lewiston-Woodville, Powellville, Roxobel and Windsor. Bertie County is comprised of fertile uplands and lowlands, with some large swamps called pocosins. The Town of Windsor lies on the banks of the Cashie River approximately 13 miles upstream of the confluence with the Roanoke River and Albemarle Sound. Windsor has experienced four major flood events in the last than 20 years, including Hurricane Floyd (1999), Tropical Storm Nicole (2010) and the consecutive events of Tropical Storm Julia and Hurricane Matthew (2016). These events resulted in extreme flooding and damage to structures. Due to the magnitude and frequency of the extreme floods, there is a strong desire to plan for the future of the town due to its historic significance and its role as an economic center for Bertie County. Windsor is particularly vulnerable to flooding. Approximately 25% of the Town’s Extra Territorial Jurisdiction (ETJ) lies within the 1% annual chance inundation limits and up to 32% is within the 0.2% annual

chance inundation limits (Figure 2). Furthermore, during floods the Cashie River divides the Town roughly in half limiting access for citizens, emergency personnel and community officials. A team of engineers and scientists from NC Sea Grant and NC State University’s Biological & Agricultural Engineering Department (BAE) worked with Town of Windsor and Bertie County officials to conduct a planning level study focused on identifying watershed and riverine flooding sources and possible engineering and mitigation alternatives to reduce flood risk and future damages. The ultimate goal of this study was to make recommendations to community officials for allocation of funds and resources for more detailed engineering studies and implementation. The study was funded through the Disaster Recovery Act of 2016 (DRA-16) allocation to the Golden LEAF Foundation. This report summarizes the technical approach, findings and recommendations from the study. **SEE STUDY ATTACHED**

Hazard sources

Primary hazard source

Flooding

Secondary hazard source (optional)

Severe storm

Tertiary hazard source (optional)

Tropical cyclone (Hurricane/Typhoon)

Implementation process description

1. Conduct a Hydrologic Assessment to determine water management and maintenance priorities and planning, including:
2. Determine if existing Hoggard’s Mill Pond dam structure and levee wall in the upper Cashie watershed could be used as water storage facilities to manage flood and drought waters. Impounding water would reduce downstream impacts on developed areas.
3. Develop a Cashie River drainage system that utilizes integrated natural and historic water control structures in the upstream portions of the black-water drainage systems (e.g., conservation easements, vegetation buffer zones, design road dams to slow down the water and create temporary holding ponds); develop partnerships to

implement the program; revisit historic mill dam locations as water storage facilities. 4.Siding Road Water Storage and Diversion - A 20-foot wall of water washed out the railroad track and parallel roadway. Develop a primary water storage area and construct a diversion mechanism.5.White Oak Drainage - Water is impounded by US 17 without a way to drain across to the south. The White Oak area receives that excess floodwater inundating the neighborhood. US 17 needs additional drainage installed so that water flows across and under the corridor for future events. Location Countywide, with focus on the areas noted above

Source Hurricane Matthew Resilient Redevelopment Plan, Flood Dynamics in the Bertie Water Crescent (NLOW), Hurricane Matthew Resilient Redevelopment Plan - Bertie County, Discussion with CAT Hazard(s) Addressed by Project: Riverine flooding, storm surge, sea level rise, runoff FEMA Community Lifelines: Safety and Security Type of Solution: Local Plans and Policies Project Estimated Timeline:9 months to 1 year Responsible Entity: County Planning Department with a consultant Potential Partners: Coordinate with Vic Thompson NRCS/Soil & Water, Town of Windsor Existing Funding: None identified by CAT Potential Funding Sources: Building Resilient Infrastructure and Communities (BRIC) State Allocation Project Estimated Cost: Medium - [REDACTED] Anticipated Benefit:High – Action would have a significant impact on risk reduction. Priority Rating: High

Primary sources description

The Cashie River (Page 9 Flood Dynamics) The Doll et al. report (2018) recommendations for flooding in the Town of Windsor considered the hydrologic dynamics within the upstream portion of the Cashie River. However, it is equally critical to focus on the downstream dynamics. Thus, an integrated approach should be built around both upstream and downstream hydrologic dynamics, the unique physical and environmental settings of inter-connected water bodies, and the ongoing changes in climate and sea level. These efforts must be integrated with a well-defined land-use management plan that includes geo-zoning and preserving substantial natural buffer areas along each stream channel, particularly in the broad upland headwaters. Planning (engineering and cost estimates) of the following are needed: 3-1.

Recommendations: Upper Cashie River a. Utilize an integrated set of natural and historic water control structures in the upstream portions of the black-water drainage systems (e.g., conservation easements, vegetation buffer zones, design road dams to slow down the water and create temporary holding ponds, etc.). The purpose is to temporarily slow down and/or store portions of flood- waters in the upstream wetlands and let the groundwater reservoir store and evapotranspiration processes utilize major portions of storm water runoff. This will slow down flash-flooding discharges, store water for periods of drought, and provide opportunities of expanding sustainable ecosystems and their services. This should build on findings of the NCSU 2018 report. b. Develop community partnerships with one or more non-profit, land conservancy groups to implement an integrated drainage system program of conservation easements and best-land use management practices. c. Revisit the Hoggard mill dam site, as well as other historic mill dam locations in the upper Cashie watershed to determine if re-occupation of one or more sites would work as water storage facilities to manage both flood and drought waters and to provide a basis for expanding sustainable ecotourism opportunities similar to Merchants Mill Pond State Park.

Staff and resources description

As outlined in the BRIC2022 NOFO sub-recipient management cost (SRMC) will be used for the purposes of: Delivery of technical assistance (e.g., plan reviews, planning workshops, training) to support the implementation of mitigation activities. Managing awards (e.g., quarterly reporting including managing Go/No-Go milestones for hazard mitigation projects submitted under the national competition, closeout). Technical monitoring (e.g., site visits, technical meetings). Purchase of equipment, per diem and travel expenses, and professional development that is directly related to the implementation of HMA programs. Staff salary costs directly related to performing the activities listed. Bertie County Government – Planning Department, Traci White NRCS Soil and Water, Vic Thompson Mideast Commission, Lisa Williams

Additional comments (optional)

Project 7.3.4 from the 2022 Bertie County Resilience Strategy, attached.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Town of Windsor-Cashie River Flood Mitigation Study.pdf	11/10/2022	lwilliams@mideastcom.org	Scope of Work Attachments	The purpose of this study was to identify potential sources of flooding within the Cashie River and its watershed, then evaluate appropriate engineering and mitigation alternatives targeted at reducing flood risk and flood damages during extreme events for the Town of Windsor. The study investigated five (5) potential sources of flooding and evaluated six (6) engineering and mitigation alternatives.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
Bertie Flood Dynamics - NCLOW.pdf	11/10/2022	lwilliams@mideastcom.org	Scope of Work Attachments	NC LOW is a 501 c 3 that has completed a drainage basin-wide study for Bertie County and the Town of Windsor. This study evaluates the dynamic interactions and underlying forces operating within and between water bodies and the landscape with a three-pronged approach: understanding the scientific framework of the regional landscape and waterscape; implementing a sustainable eco-tourism program based on the regions natural resources; and educating the local population about the natural resources.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
<u>RCCP Resilience Strategy 2022 - Bertie County.pdf</u>	11/10/2022	lwilliams@mideastcom.org	Scope of Work Attachments	This Resilience Strategy was developed for the Bertie County under the North Carolina Resilient Coastal Communities Program (RCCP) by the North Carolina Division of Coastal Management (DCM) and SWCA Environmental Consultants (SWCA) in consultation with a local Community Action Team (CAT).	
<u>Bertie Co Slides updated by bertie.pptx</u>	01/05/2023	lwilliams@mideastcom.org	Scope of Work Attachments	Project Power Point overview	
<u>Upper Cashie #1.pdf</u>	01/05/2023	lwilliams@mideastcom.org	Scope of Work Attachments	PART 1 -Upper Cashie River Recommendations for Specific Sites and Implementation of Resilience Strategies Bertie County	
<u>Upper Cashie #2 (4).pdf</u>	01/05/2023	lwilliams@mideastcom.org	Scope of Work Attachments	PART 2 -Upper Cashie River Recommendations for Specific Sites and Implementation of Resilience Strategies Bertie County	

Filename	Date uploaded	Uploaded by	Label	Description	Action
Bertie Vulnerability Assessment - UNC.pdf	11/10/2022	lwilliams@mideastcom.org	Scope of Work Attachments	The purpose of this capstone is to use a vulnerability assessment tool to analyze Bertie County's threats from potential natural hazards to the County's population and infrastructure. Bertie County sits in the northeast part of North Carolina, and covers 741 square miles with a maximum elevation of 97 feet. With the county seat of Windsor located in the south central region, there are also eight incorporated townships in the county. It is made up largely of coastal plains.	

[Continue](#)

Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Schedule

Specify the work schedule for the mitigation activities.

Add tasks to the schedule

Please include all tasks necessary to implement this mitigation activity; include descriptions and estimated time frames.

<p>Task Name Hydrologic Assessment and Development of a Drainage and Water Management</p>	<p>Start Month 3</p>	<p>Task Duration (in Months) 12 months</p> <p>Task Description Specifically the Upper Cashie River 7.3.4 2022 Bertie County Resilience Strategy (ATTACHED) produced by SWCA Environmental Consultants.</p>
<p>Task Name Scope of Work Environmental Engineering & Cost Estimates</p>	<p>Start Month 12</p>	<p>Task Duration (in Months) 12 months</p> <p>Task Description Define Scope of Work for environmental engineering and cost estimates for Upper Cashie River Storm water BMP's.</p>

Estimate the total duration of your proposed activities (in months) **24**

Proposed project start and end dates

Start Date **2023-01-01**
End Date **2025-12-31**

Continue

Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Budget

Budget cost estimate and management cost (optional) should directly link to your scope of work and work schedule. You must add at least one item(s) greater than \$0 for your cost estimate. Once you have added item(s) for your cost estimate, you may then add the item(s) for management cost (optional). As necessary, please adjust your federal/non-federal cost shares and add the non-federal funding source(s) you are planning to use this project. Once you have completed this section, please click the Continue button at the bottom of this page to navigate to the next section.

Add budget cost types and item(s)

Click the Add cost type button below to add cost type cost estimate and then click the Add item(s) button to add the item(s) for the cost estimate. After adding items to your cost estimate, you may then select Add cost type button again to add management costs (optional) and applicable items.



Budget type: Non construction

▶	Cost type: Cost estimate	
▶	Cost type: Management cost	

Program income (optional)

Cost share

Cost share or matching means the portion of project costs not paid by federal funds.


Proposed federal vs. non-federal funding shares


Hazard Mitigation Assistance (HMA) funds may be used to pay up to 75% federal share of the eligible activity costs. For Building Resilient Infrastructure and communities (BRIC), small impoverished communities may be eligible for up to 90% federal share. For Flood Mitigation Assistance (FMA), and severe repetitive loss (SRL) properties may be eligible for up to 100% federal share. Repetitive loss (RL) properties may be eligible for up to

90% federal share. Flood Mitigation Assistance (FMA) and severe repetitive loss (SRL) properties may be eligible for up to 100% federal share. Repetitive loss (RL) properties may be eligible for up to 90% federal share.

Is this an Economically Disadvantaged Rural Community?

This determines your federal/non-federal share ratio.
No

	%	\$ Dollar amount
	Percentage	
Proposed federal share	76.19	

Proposed non-federal share	23.81	
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Based on total budget cost:



Please provide justification for exceeding the allowable federal share here.

Did not exceed - Fed-share includes SRMC

Non-federal funding sources here

That portion of the total costs of the program provided by the non-federal entity in the form of in-kind donations or cash match received from third parties or contributed by the agency. In-kind contributions must be provided and cash expended during the project period along with federal funds to satisfy the matching requirements.

Funding source	Funding amount	% Non-federal share by source
▶ Funding source: Bertie County		

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
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Filename	Date uploaded	Uploaded by	Label	Description	Action
<u>Bertie County Local Match Fund Commitment Letter.pdf</u>	01/05/2023	lwilliams@mideastcom.org	Budget Attachments	<i>No description given.</i>	

Continue

Upper Cashie River Hydrologic Assessment and Drainage and Water Management Plan

Evaluation

Is the applicant participating in the Community Rating System (CRS)? **No**

Is the applicant a Cooperating Technical Partner (CTP)? **No**

Was this application generated from a previous FEMA HMA Advance Assistance or Project Scoping award or any other federal grant award, or the subapplicant is a past recipient of Building Resilient Infrastructure and Communities (BRIC) non-financial Direct Technical Assistance? **No**

Has the applicant adopted building codes consistent with the international codes? **Yes**

Year of building code **2018**

Please provide the building code. **2018 NC Building Codes, based on the ICC codes with applicable North Carolina Amendments**

Have the applicant's building codes been assessed on the Building Code Effectiveness Grading Schedule (BCEGS)? **Yes**

Select rating. **4**

Describe involvement of partners to enhance the mitigation activity outcome. **North Carolina Department of Public Safety Bertie County Government – Planning Department, Traci White Bertie County Government Public Works Bertie County Government Staff Town of Windsor NRCS Soil and Water, Vic Thompson Mideast Commission, Lisa Williams George Wood, Environmental Engineer Dr. Stanley Riggs East Carolina University Dr. Barbara Doll, North Carolina State University SWCA Environmental Consultants**

Describe how this planning activity benefits your community and how the plan/data will be used to promote resiliency. **Planning will prepare Bertie County to get to "shovel ready" and to have documentation available to most accurately present the cost benefit of the project. Planning and evaluation will also provide Bertie County insight into future**

impact and resiliency building measures. It is the goal that this project will utilize an integrated set of natural and historic water control structures in the upstream portions of the black-water drainage systems (e.g., conservation easements, vegetation buffer zones, design road dams to slow down the water and create temporary holding ponds, etc.). The purpose is to temporarily slow down and/or store portions of flood- waters in the upstream wetlands and let the groundwater reservoir store and evapotranspiration processes utilize major portions of storm water runoff. This will slow down flash-flooding discharges, store water for periods of drought, and provide opportunities of expanding sustainable ecosystems and their services. This should build on findings of the NCSU 2018 report.

Additional comments (optional)

BCEGS - Building Code Effectiveness Grading Classification is 4 for 1 & 2 family residential property and 3 for commercial and industrial property. The report was completed in 2019.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
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Continue