## **Subapplicant information**

Name of federal agency

**FEMA** 

Type of submission

**Application** 

## WHITEVILLE FIRE DEPARTMENT

120 E COLUMBUS ST

WHITEVILLE, NC 28472 United States

State	DUNS#	EIN#
NC	034414594	566001372

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?

## **Contact information**

#### **Subrecipient Authorized Representative (SAR)**

Robert Lewis	Primary phone	Mailing address
rlewis@ci.whiteville.nc.us		

## Point(s) of contact

MR Robert J Lewis Planning Director	Primary phone 9106401380 ext 2005 Work	Additional phones 9106428046 Work	Mailing address PO Box 607 Whiteville NC 28472
	Fax		
<u>rlewis@ci.whiteville.nc.us</u>			

## 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
WHITEVILLE CITY OF	047	370071	Υ	9	7

Please provide any additional comments below (optional).

The attachment titled: "Technical Review\_Scoring Support\_Whiteville\_FEMA BRIC\_Jan2023\_final" is provided to assist in the technical evaluation of this project, and also includes an overall summary of the proposed project.

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
Technical Review_Scoring Support_Whiteville_FEMA BRIC_Jan2023_final.pdf		tmklondi@ncsu.edu	Community Attachments	Technical Review: Scoring Support document	

## 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 Pla
Robeson-Bladen-Columbus Hazard Loc
Mitigation Plan Miti

Plan type Local Multijurisdictional Multi-Hazard Plan approval date 06/12/2020

Mitigation Plan

Proposed activity description

Please provide any additional comments below (optional).

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
Mitigation Plan Whiteville FEMA BRIC Highlighted Extract Nov2022.pdf	11/17/2022	tmklondi@ncsu.edu	Mitigation Plan Attachments	Highlighted Hazard Mitigation Plan (HMP); select pages extracted as pertinent to the proposed scope of work	

## 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)

Whiteville Floodprint: Mollie's Branch Stream Restoration and Infrastructure Improvements

#### **Activities**

Primary activity type

Primary sub-activity type

Primary sub-activity type

Flood control

Floodplain and stream restoration

Floodplain and stream restoration

Secondary activity type (Optional)

Geographic areas description

The proposed project is focused in the area surrounding and including Mollie's Branch, which is a stream located in the City of Whiteville, North Carolina (Columbus County).

#### **Community lifelines**

Primary community lifeline

Primary sub-community lifeline

Secondary community lifeline (optional)

Secondary sub-community lifeline

Tertiary community lifeline (optional)

Transportation

Shelter

Food, water, shelter

Highway/roadway/motor vehicle

#### **Hazard sources**

Primary hazard source

Secondary hazard source (optional)

Tertiary hazard source (optional)

Is this a phased project?

Are you doing construction in this project?

Percentage of population impacted

Provide detailed description of population impacted

Provide a clear and detailed description of your proposed activity

Flooding

Tropical cyclone (Hurricane/Typhoon)

Yes

Yes

100

Populations potentially impacted by this project include those that are within: i) the Lower Soule's Swamp Subwatershed; ii) the project's anticipated Traffic Impact Area; and iii) the Central Middle School Attendance Area. Collectively, these areas represent locations and populations most likely to be impacted by the proposed scope of work, and also encompass the entire municipal boundary of the City of Whiteville. Because the entire geographic area of the City is included in either one or multiple of the aforementioned impact areas, the percentage of the population to be impacted by the project is stated as 100%.

This proposal is requesting \$3,695,649.75 to support the implementation of NATURE-BASED SOLUTIONS and INFRASTRUCTURE IMPROVEMENTS along Mollie's Branch in Whiteville, North Carolina. The proposed combination of "green" and "gray" infrastructure enhancements call for approximately 5,100 linear feet of floodplain restoration, four (4) roadway modifications (e.g., upgraded culverts) at locations where the stream crosses underneath existing roadbeds, and an expanded area of constructed wetlands within the Central Middle School recreational complex. The restoration of Mollie's Branch is a foundational component of the Whiteville Floodprint Plan, which is the RESULT OF A LONG-TERM PLANNING, DESIGN, AND PUBLIC ENGAGEMENT PARTNERSHIP between the City of Whiteville and the NC State University Coastal Dynamics Design Lab (CDDL). Development of the Floodprint included the use of geospatial analyses, hydraulic modeling, fieldcollected data, and input from community stakeholders in order to holistically understand: i) locations most vulnerable to property damage due to flooding; and ii) stakeholder preferences for various flood mitigation alternatives presented. This proposal - and the process connected to its development and refinement - represent a scope of work that reflects the preferences of community stakeholders, has garnered support from local leadership, and has been determined to be a COST-EFFECTIVE solution for REDUCING FLOOD DAMAGES in the project area. However, as a DISADVANTAGED COMMUNITY in a rural county, projects containing these types of benefits are seldom accessible due to a combination of environmental and demographic vulnerabilities facing the city and its people. For reference, the Census Tract

(37047930900) that includes the project area has a Centers for Disease Control and Prevention (CDC) Social Vulnerability Index (SVI) rating among the highest in the nation: 0.9708 (on a 0-to-1 scale), with specific socioeconomic factors, such as: poverty level, unemployment level, income, and lack of educational attainment being particularly elevated within and around the project area. This data not only illustrates the need for external infusions of financial resources to support resilience-building measures in the project area, but it also symbolizes the significance that an investment from the FEMA BRIC program would have in supporting flood mitigation needs within this community.

If funds are awarded, service-providers that respond to an open Request for Qualifications (RFQ) for design, engineering and permitting scopes of work will be vetted and selected via a public procurement process. Upon selection of a service-provider, regular coordination between the vendor and the City of Whiteville, NC State University Coastal Dynamics Design Lab (CDDL), Columbus County, the North Carolina Department of Transportation (NCDOT), the North Carolina Department of Environmental Quality (NCDEQ), and the Federal Emergency Management Agency (FEMA), at a minimum, will be required to ensure the successful completion of this project. The design, engineering, and permitting scopes of work are anticipated to require up to 18 months to complete, though added efficiencies are anticipated due to the geospatial analysis, hydraulic modeling, community engagement, and planning work that has already been completed or is currently underway as part of the Whiteville Floodprint effort.

This project is technically feasible and will be effective in significantly reducing flood risks in the community. The specific combination of naturebased solutions and infrastructure improvements included in this proposal modeling to offer the greatest flood reduction benefits to homes, property, and public infrastructure in the Mollie's Branch project area. As such, this proposal draws upon FEMA guidance ("Building Community Resilience with Nature-Based Solutions," 2021) for implementing several "watershed scale" practices (e.g., "floodplain restoration" and "stormwater park") as part of an interconnected suite of nature-based solutions. The cumulative benefits of these practices are primarily intended to better control and manage floodwaters throughout the project area, but will also offer a wide breadth of ancillary benefits, such as: improving water quality, increasing available habitat for wildlife, and addressing existing inequities in access to recreational amenities. The proposed location of this project has been specifically identified because it correlates with areas in Whiteville modeled to receive damaging floodwaters on a frequent, recurring basis. Specifically, hydraulic analysis conducted for Mollie's Branch indicates that the extent of even a 25-year flood event intersects thirty (30) buildings, and the expected flood height would overtop three (3) of the four roadway crossings in the study area (Williamson, Burkhead, and Lewis). The concentration of homes within the modeled flood extents of these smaller, more frequent storm events triggers elevated flood risks because most of the homes in this area have either slab-on-grade foundations, or the first floors are only 2-3 steps above the ground. These conditions lead to substantial property damages during commonplace storm events, and has been validated by stakeholder testimonials during multiple public engagement events as part of the Whiteville Floodprint planning effort. Hydraulic modeling shows that proposed improvements along Mollie's Branch will significantly reduce the amount of observed flooding in the community. The final schematic plan is expected to yield 2- to 4-foot reductions in Water Surface Elevation (WSE) during smaller flood events (e.g., 10-year), and WSE reductions of 1- to 2-feet during larger flood events (e.g., 100-year). This project will collectively yield: i) an approximately 75% reduction in buildings intersecting the modeled flood extents of smaller, more frequent storm events; and ii) all four (4) road crossings in the project area able to withstand 100-year flood heights or

The partnership between the City of Whiteville and the NC State University to successfully co-manage and complete this project should funds be at minimum, the following activities: project management (e.g., quarterly reporting), technical assistance (e.g., plan reviews), monitoring (e.g., site visits), purchase of equipment, travel expenses, and staff salary costs select work experience for the listed representatives from the City and CDDL

How will the mitigation activity be implemented?

Describe how the project is technically feasible and will be effective in reducing the risk by reducing or eliminating damage to property and/or loss of life in the project area. Please include engineering design parameters and references to the following: preliminary schematic or engineering drawings/design; applicable building have been assessed through multiple iterations of planning and hydraulic codes; engineering practices and/or best practices; level of protection (e.g., life safety, 100-yr flood protection with freeboard, 100-yr wind design, etc.):

Who will manage and complete the mitigation activity?

Coastal Dynamics Design Lab (CDDL) will continue in its collaborative efforts awarded. Sub-recipient management costs (SRMC) are anticipated to include, directly related to performing the aforementioned activities. Qualifications and include: City of Whiteville: Terry Mann (Mayor of Whiteville), Darren Currie

(City Manager), and Hal Lowder (Director of Emergency Services) collectively share 35+ years of involvement as elected officials and/or staff for the City of Whiteville. This group has overseen the implementation of numerous public works projects and initiatives in Whiteville, which includes several programs after Hurricane Matthew (2016) that increased the resilience of drainage systems and public utilities in the downtown service district. NC State University CDDL: Andy Fox (Director and Professor), Travis Klondike (Assistant Research Professor and Project Manager), and Leslie Bartlebaugh (Community Extension Specialist) are all licensed Landscape Architects in North Carolina, and have 30+ years of experience in designing and implementing green infrastructure projects in civic landscapes. The CDDL team has offered similar technical assistance services to other North Carolina communities in order to: i) serve as a conduit between Floodprint planning recommendations and connected built work; and ii) provide capacity support to local units of government so that procured services and deliverables align with the documentation, compliance, and permitting requirements of associated projects.

Will the project address the hazards identified and what risks will remain from all hazards after project implementation (residual risk)?

Yes, this project will STRENGTHEN AND STABILIZE an interdependent network of FUNDAMENTAL NEEDS AND SERVICES within the community that are currently vulnerable to environmental risks and associated hazards due to flooding. Specific benefits to Community Lifelines include: 1. Food, Water, Shelter: Much of the existing housing stock in the project area consists of structures that have either slab-on-grade foundations or are only minimally elevated above the adjacent grade. These conditions lead to significant property damage during smaller storm events (e.g., 30 buildings intersect the extent of a modeled 25-year flood event), and threaten the long-term viability of living conditions in the neighborhood when larger storm events impose damages to properties across entire street blocks. The scale of these impacts can be significantly reduced, however, as hydraulic analysis of the proposed condition shows an approximately 75% reduction in buildings intersecting the modeled flood extents across various return periods (10-, 25-, 50-, and 100-year scenarios); and 2. Transportation: Three (3) of the four road crossings in the project area currently overtop with floodwaters during modeled 10-year flood events. The proposed condition is expected to yield 2to 4-foot reductions in Water Surface Elevation (WSE) during smaller flood events (e.g., 10-year), and WSE reductions of 1- to 2-feet during larger flood events (e.g., 100-year). This will collectively enable all four (4) road crossings in the project area - accountable for over 8,000 daily vehicular trips (NCDOT, 2019) - to withstand the modeled flood height of 100-year flood events. While hydraulic analysis conducted in the project area shows there will be significant reductions in Water Surface Elevation (WSE) during all modeled events, some residual risk will remain during larger flood events (e.g., 500year), particularly at locations nearest the floodway.

Does the mitigation activity incorporate nature-based solutions?

When will the mitigation activity take place?

Yes

Using previous FEMA BRIC timelines as a reference, the proposed mitigation activities are anticipated to begin in January of 2024. However, this project is able to begin sooner if funds are made available at an earlier date. The proposed project schedule anticipates all pre-construction activities (e.g., procurement, design / engineering services, permitting, etc.) to be complete by project month eighteen (18). Following, it is anticipated that all construction activities are to be completed by project month thirty-three (33). This allows for three (3) months of contingency should any unexpected circumstances arise, and will ensure completion of all BRIC-funded activities within a thirty-six (36) month period of performance.

Explain why this project is the best alternative. What alternatives were considered to address the risk and why was the proposed activity considered the best alternative?

The process of determining this proposal's scope of work derived from a comprehensive analysis, planning, and community engagement effort connected to the Whiteville Floodprint Plan. Recommendations included in the Floodprint Plan considered: i) causes of flooding in Whiteville; ii) impacts of flooding in high-risk areas; and iii) stakeholder preferences for various flood mitigation alternatives presented. Key outcomes from this planning process, as it relates to this project proposal, include the following: 1. Preliminary analysis indicated a concentration of residences and businesses along Mollie's Branch that are within the mapped floodplain and are likely to receive property damages during major storm events. During the Whiteville Floodprint effort, three (3) flood mitigation alternatives were presented to community stakeholders of Mollie's Branch: i) Existing Conditions ("No Change"); ii) Two-Stage Ditch + Larger Culverts ("Scenario A"); and iii) Stream and Floodplain Restoration + Road Crossing Modifications ("Scenario B"). Hydraulic modeling for Scenarios A and B both showed substantial reductions in Water Surface Elevation (WSE) during smaller storm events

(e.g., 10- and 25-year floods), however, Scenario B offers greater flood protection during larger storm events (e.g., 50- and 100-year floods). Of the 46 votes recorded for the various elements in these scenarios, 67.3% (31 votes) were in support of the features presented in Scenario B. 2. Feedback received from stakeholders that preferred elements other than what was included in Scenario B primarily concerned the specific routing and width of the stream restoration component of the project. Revisions to the alignment of the stream that address this feedback have been combined with the initial infrastructure improvements shown in Scenario B in order to establish a final schematic plan for Mollie's Branch ("Scenario C"). Scenario C was then subsequently vetted for effectiveness via hydraulic modeling, benefit-cost analysis, and public feedback prior to inclusion in this grant application.

maintenance, schedule and cost information. The subapplicant or owner of the area to be mitigated is responsible for maintenance (including costs of long-term care) after the project is completed?

Please identify the entity that will perform any long-term maintenance and provide a The City of Whiteville will be responsible for performing long-term maintenance of the project area, and will do so in accordance with existing maintenance schedules utilized by the City's Parks and Recreation and Public Works Departments. Maintenance costs are estimated to equal \$24,638.00 annually (calculated at 0.5% of the total project cost per FEMA guidance included in the "Supplemental Guidance for Conducting a Benefit-Cost Analysis for a Floodwater Diversion and Storage Project," 2016).

Additional comments (optional)

Please reference the four (4) attachments being provided to support the review of this project's scope of work which are most pertinent to the Qualitative Review Criterion: i) Risk Reduction / Resilience Effectiveness; ii) Implementation Measures; iii) Population Impacted; and iv) Engagement and Outreach Activities.

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
Qualitative Review Engagement and Outreach Whiteville FEMA BRIC Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Scope of Work Attachments	Qualitative Review: Engagement and Outreach document	
Qualitative Review Risk Reduction and Resilience Whiteville FEMA BRIC Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Scope of Work Attachments	Qualitative Review: Risk Reduction and Resilience document	
Qualitative Review Population Impacted Whiteville FEMA BRIC Jan2023.pdf	01/06/2023	tmklondi@ncsu.edu	Scope of Work Attachments	Qualitative Review: Population Impacted document	
Qualitative Review Implementation  Measures Whiteville FEMA BRIC Jan2023.pdf	01/06/2023	tmklondi@ncsu.edu	Scope of Work Attachments	Qualitative Review: Implementation Measures document	

#### **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.

Task Name Issuance of Request for Qualifications (RFQ)	Start Month 01	Task Duration (in Months) 02 months
	Task Description Submit RFQ and select State grant contracting	ct consultant(s) to complete design / engineering and permitting services +
Task Name Design / Engineering	Start Month	Task Duration (in Months) 13 months
		construction drawings, reports, and permit sets; 30%, 60%, 90%, 100% um. Go/No-Go Milestone.

Task Name Permitting	Start Month 03	Task Duration (in Months) 16 months
	minimum: Environmental an	oproval of all aspects of the project requiring permits; which will include, at d Historic Preservation (EHP), Clean Water Act (CWA; Sections 401, 402, 1988 (Floodplain Management), and Executive Order 11990 (Wetland
Task Name Budget Reconciliation and Issuance of Invitation for Bids (IFB)	Start Month 15  Task Description	Task Duration (in Months) 04 months
	-	ultant(s) to complete construction services; coordination with close-out of services.
Task Name Mobilization for Construction Activities	Start Month	Task Duration (in Months) 01 months
	Task Description  Mobilization and Site Prepar	ration of Staging Area(s)
Task Name Construction	Start Month 20	Task Duration (in Months) 14 months
	earthwork, utility relocation,	ope: erosion and sediment control, site demolition, clearing and grubbing, planting / stabilization / irrigation, site walls and fencing, roadway, roadway repair and resurfacing, walkways and trails, educational
Task Name Project Oversight, Management, and Reporting	Start Month 01	Task Duration (in Months) 36 months
	Task Description Project oversight, managem project.	ent, and reporting per FEMA requirements; includes close-out of overall
Estimate the total duration of your propose	ed activities (in months).	36
Proposed project start and end dates		
Start Date		2024-01-01
End Date		2026-12-31

## Introduction

## **Project location**

Provide a detailed description of the proposed project's location.

The proposed project is located entirely within the jurisdictional boundaries of the City of Whiteville in Columbus County, North Carolina. The project area generally consists of a 100-foot wide riparian corridor along Mollie's Branch that spans approximately 5,100 linear feet from Washington Street (northernmost extent) to Virgil Street (southernmost extent). Hydrologically, this project is located within the Lumber River Basin (030402), Waccamaw Subbasin (03040206), White Marsh Watershed (0304020602), and Lower Soule's Swamp Subwatershed (030402060202). See the attachment titled: "Location\_Whiteville\_FEMA BRIC\_Project Location\_Nov2022" for aerial imagery and supplemental ground-level photography of existing conditions within and around the project area.

Latitude **34.331296** 

Longitude -078.713908

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
Location Whiteville FEMA BRIC Project Location Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Project Location Attachments	Project Location document	

#### Project benefiting area

Provide a detailed description of the proposed project's benefiting area.

The Project Benefiting Area encompasses an approximately 15.07 acre area, and includes forty-one (41) single-family residential units, forty-eight (48) multi-family residential units (Whiteville Housing Authority), nine (9) businesses, and four (4) public/private entities (Central Middle School, North Whiteville Academy, T.W. Apostolic Church, and City of Whiteville Pump Station). This area is representative of parcels that: i) intersect the anticipated limits-of-work boundary; and ii) are shown to have reductions in water surface elevation during flooding events, based on the results of hydraulic modeling analyses that have been completed. See the attachment titled: "Location\_Whiteville\_FEMA BRIC\_Benefiting Area\_Nov2022" for additional reference.

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
Location Whiteville FEMA BRIC Benefiting Area Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Location project benefiting area Attachments	Project Benefiting Area document	

## Project impact area

Provide a detailed description of the proposed project's impact area.

The Project Impact Area constitutes three areas defined by environmental and social characteristics of the project that overlap and extend beyond the Project Benefiting Area. Collectively, these areas encompass the entire municipal boundary of the City of Whiteville, and include: 1. Lower Soule's Swamp Subwatershed Area. This data layer is representative of the 12-Digit **HUC Subwatershed (North Carolina Department of Environmental Quality,** 2022) that includes Mollie's Branch, and includes both upstream and downstream portions of the subwatershed from the proposed limits of work. 2. Traffic Impact Area. This data layer illustrates a buffer area around segments of roadway (North Carolina Department of Transportation, 2022) that are anticipated to be either: i) temporarily impacted during construction of the project (e.g., temporary re-routing of traffic); or ii) permanently impacted post-construction through increased safety and accessibility during flood events (North Carolina State University, 2022). 3. Central Middle School Attendance Area. This data layer represents the Unified School District area for Central Middle School (Whiteville City Schools, 2022). This area is included in the Project Impact Area because of the significant scope of work proposed on the Central Middle School property, and the anticipated ancillary benefits that nature-based solutions will have on the quality of recreational and educational amenities afforded to students during the projected useful life of the project (30 years, minimum). Central Middle School enrolls approximately 500 students per year, on average. See the attachment titled: "Location\_Whiteville\_FEMA BRIC\_Impact Area\_Nov2022" for additional reference.

#### **Attachments**

Filename Di	ate ploaded	Uploaded by	Label	Description	Action
Location Whiteville FEMA BRIC Impact Area Nov2022.pdf	1/18/2022	tmklondi@ncsu.edu	Location project impact area Attachments	Project ImpactArea document	

No

## **Project site inventory**

Does this project sub**application** propose to mitigate a property/structure(s)? ( Examples: residential home, commercial building, bridge, fire station, levee, pumping station, wastewater treatment plant, telephone pole, electric line, etc.)

Please download the excel template, and then fill out the template with building or infrastructure data.

## **Budget**

Budget cost estimate 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. 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)

First, 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.

Grand total: \$5,173,909.65

## **Budget type: Construction**

Cost type: Cost estimate \$4,927,533.00

Cost type: Management cost \$246,376.65

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. Building Resilient Infrastructure and Communities (BRIC) and small impoverished communities 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.

	76 Percentage * Dollar amount
Is this an Economically Disadvantaged Rural  Community?   1	Proposed federal share 71.43 3695649.75
This determines your federal/non-federal share ratio.	Proposed non-federal 28.57 1478259.90 share
No	Base <sup>4</sup> on total Mudget cost. 69 173 909 68

#### 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: Grant (Contractual Services)	11.90%	\$175,938.00
•	Funding source: Grant (Contractual Services)	16.90%	\$249,880.00
•	Funding source: In-Kind Services (Personnel)	1.95%	\$28,800.00
•	Funding source: In-Kind Services (Personnel / Labor)	2.54%	\$37,500.00
•	Funding source: Other Non-Federal Funding (Phase Two)	66.71%	\$986,141.90

Please provide any additional comments below (optional).

Budget Summary by Phase = Phase One (\$572,720.00); Phase Two (\$4,601,189.65) Please reference the two (2) attachments being provided to support the review of budget and cost-share information for this project.

These attachments include the following information: i) Cost Estimate; and ii) Match Commitment Letter.

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
Budget Cost Estimate Whiteville FEMA BRIC Jan2023.pdf	01/06/2023	tmklondi@ncsu.edu	Budget Attachments	Cost Estimate document	
BRIC2022-Whiteville-MatchLetter.pdf	01/23/2023	tmklondi@ncsu.edu	Budget Attachments	Match Letter document (City of Whiteville)	

## Cost-effectiveness How was cost-effectiveness determined for this project? ✓ BCA completed in FEMA's BCA toolkit Subapplicant must attach supporting documentation. Pre-calculated benefits Substantial damage in special flood hazard area Other BCA methodology approved by FEMA in writing Not applicable Not applicable What are the total project benefits? (\$) 7999738.00 What are the total project cost? (\$) 5410449.00 What is the benefit-cost ratio (BCR) for the entire project? 1.47 Was sea level rise incorporated into the flood elevations in the BCA? No Were environmental benefits added to the project benefits? Yes Were social benefits added to the project benefits? Yes Please provide any additional comments below (optional). The specific combination of nature-based solutions and infrastructure improvements included in this proposal have been assessed through multiple iterations of planning and hydraulic modeling to offer the greatest flood reduction benefits to homes, property, and public infrastructure in the Mollie's Branch project area. As such, this proposal draws upon FEMA guidance (2021) for implementing several "watershed scale" practices (e.g.,

"floodplain restoration" and "stormwater park") as part of an interconnected suite of nature-based solutions. The Census Tract (37047930900) that includes the project area has a Centers for Disease Control and Prevention (CDC) Social Vulnerability Index (SVI) rating among the highest in the nation: 0.9708 offering the BCA waiver and further assistance from FEMA in addressing any issues found with the BCA in the NTR review. The cumulative benefits of these practices are primarily intended to better control and manage floodwaters throughout the project area, but will also offer a wide breadth of ancillary benefits, such as: improving water quality, increasing available habitat for wildlife, and addressing existing inequities in access to recreational amenities. Please reference the seven (7) attachments being provided to support the review of cost-effectiveness for this project. These attachments include the following information: i) BCA Report (PDF format); ii) BCA Report (Excel format); iii) BCA Methodology Report; iv) Hydraulic Summary Report (to also serve as "Technical Feasibility Support"); v) Property Tax Cards; vi) Ecosystem Service Areas (within the project's limits of work); and vii) Alternative Cost-Effectiveness Methodology Narrative.

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
BCA Whiteville FEMA BRIC Ecosystem Services Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Cost Effectiveness Attachments	BCA: Ecosystem Services document	
BCA_Whiteville_FEMA_BRIC_PropertyTaxCards_Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Cost Effectiveness Attachments	BCA: Property Tax Cards	
BCA_Whiteville_FEMA_BRIC_HydraulicSummaryReport_Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Cost Effectiveness Attachments	BCA: Hydraulic Summary Report document	
Alternative BCA_Whiteville_FEMA BRIC_ExcelWorkbook_Jan232023.xlsx	01/23/2023	tmklondi@ncsu.edu	Cost Effectiveness Attachments	Alternative BCA: Excel Workbook	
Alternative BCA_Whiteville_FEMA_BRIC_ReportPDF_Jan232023.pdf	01/23/2023	tmklondi@ncsu.edu	Cost Effectiveness Attachments	Alternative BCA: Report PDF	
Alternative BCA_Whiteville_FEMA BRIC_AlternativeCostEffectivenessMethodologyNarrative_Jan232023.pdf	01/23/2023	tmklondi@ncsu.edu	Cost Effectiveness Attachments	Alternative BCA: Alternative Cost Effectiveness Methodology Narrative	
BCA_Whiteville_FEMA_BRIC_MethodologyReport_Jan232023.pdf	01/23/2023	tmklondi@ncsu.edu	Cost Effectiveness Attachments	BCA: Methodology Report	

# Environmental/Historic Preservation (EHP) Review Information Introduction

An environmental/historic preservation review is required for all activities for which FEMA funds are being requested. FEMA will complete this review with the assistance of both the state or tribal government and the local applicant. It is important that you provide accurate information. If you are having problems completing this section, please contact your **application** point of contact.

#### A. National Historic Preservation Act - Historic Buildings and Structures

1. Does your project affect or is it in close proximity to any buildings or structures 50 Yes years or more in age?

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please attach the required documents below.)

The property address and original date of construction for each property affected (unless this information is already noted in the Properties section).

3, 9.30 AIVI			AGO - Subapplication				
A minimum of two color photographs show	ing at least thre	e sides of each structu	re (Please label the photos accordingly).				
✓ A diagram or USGS 1:24,000 scale quadra	angle map displa	aying the relationship of	of the property (s) to the project area.				
To help FEMA evaluate the impact of the pro	oject, please in	dicate below any oth	er information you are providing. (optional)				
Information gathered about potential historic properties in the project area, including any evidence indicating the age of the building or structures that are listed or eligible for listing on the National Register of Historic Places or within or near a National Register district. Sources for this information may include the State Historic Preservation Officer, and/or the Tribal Historic Preservation Officer (SE planning office, historic preservation organization, or historical society.							
			or potential historic buildings or structures, and any all se address and note associated costs in your project		d or		
For acquisition/demolition projects affecting proofing as alternatives to demolition.	g historic buildin	gs or structures, any o	lata regarding the consideration and feasibility of elev-	ation, relocation, or	flood		
Attached materials or additional comments	S.						
Please provide an explanation and any information assist FEMA in its review. (optional)	tion about this <sub>l</sub>	ic h th p ti B re N	ne proposed project will not directly impact any stocated within Whiteville's Historic District (Study Lowever there are several structures adjacent to the lat are older than 50 years in age. More information operty within or adjacent to the project area is probled: "EHP_SectionA_Whiteville_FEMA BRIC_Historic "EHP_SectionA_Whiteville, the subapplicant eview request to the NC Historic Preservation Office CHPO has not yet provided a statement or respondence is provided on the last page of the EHP_SectionA_Whiteville_FEMA BRIC_Historic But the property of the CHP_SectionA_Whiteville_FEMA BRIC_Historic But the provided on the last page of the EHP_SectionA_Whiteville_FEMA BRIC_Historic But the provided on the last page of the EHP_SectionA_Whiteville_FEMA BRIC_Historic But the provided on the last page of the last pa	ist / Site ID CB115i e proposed project n pertinent to each ovided in the attact oric submitted a project (NCHPO) on 1/4i se. This email attachment titled:	3), site nment		
, , ,	about this proje	ct that could assist FE	MA in its review.				
lease provide an explanation and any information  Attachments	about this proje			Description	Actio		
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Itachments Ilename  HP Section A Whiteville FEMA BRIC USGS	Date			Description  EHP Section A: USGS Map	Actio		
,	Date uploaded	Uploaded by	Label	EHP Section A:	Actio		
Attachments  Illename  HP Section A Whiteville FEMABRIC USGS  Iap Nov2022.pdf  HP Section A Whiteville FEMABRIC Historic uildings Jan2023.pdf  B. National Historic Preservation oes your project involve disturbance of ground?  Please confirm that you have provided the i	Date uploaded 11/18/2022 01/06/2023 Act - Archo	Uploaded by  tmklondi@ncsu.edu  tmklondi@ncsu.edu  eological Reso Yes	Label  closeProximityTo50YearOldBuilding.attachmentIds  closeProximityTo50YearOldBuilding.attachmentIds  urces	EHP Section A: USGS Map EHP Section A: Historic Buildings document			
Ilename  HP Section A Whiteville FEMA BRIC USGS ap Nov2022.pdf  HP Section A Whiteville FEMA BRIC Historic uildings Jan2023.pdf  Des your project involve disturbance of ground?  Please confirm that you have provided the is section of the application, please attach the	Date uploaded  11/18/2022  01/06/2023  Act - Arche	Uploaded by  tmklondi@ncsu.edu  tmklondi@ncsu.edu  eological Reso Yes  ed below by selectin ments below.)	Label  closeProximityTo50YearOldBuilding.attachmentIds  closeProximityTo50YearOldBuilding.attachmentIds  urces  g each check box. (If you have not provided these	EHP Section A: USGS Map EHP Section A: Historic Buildings document			
HP Section A Whiteville FEMA BRIC USGS ap Nov2022.pdf HP Section A Whiteville FEMA BRIC Historic uildings Jan2023.pdf  B. National Historic Preservation oes your project involve disturbance of ground?  Please confirm that you have provided the insection of the application, please attach the A description of the ground disturbance by	Date uploaded  11/18/2022  01/06/2023  Act - Arche  Information lists required docu-	Uploaded by  tmklondi@ncsu.edu  tmklondi@ncsu.edu  eological Reso Yes  ed below by selectin iments below.)	Label  closeProximityTo50YearOldBuilding.attachmentIds  closeProximityTo50YearOldBuilding.attachmentIds  urces  g each check box. (If you have not provided these depth, etc.) and location.	EHP Section A: USGS Map EHP Section A: Historic Buildings document			
Attachments  Illename  HP Section A Whiteville FEMABRIC USGS  Iap Nov2022.pdf  HP Section A Whiteville FEMABRIC Historic uildings Jan2023.pdf  B. National Historic Preservation  oes your project involve disturbance of ground?  Please confirm that you have provided the is section of the application, please attach the	Date uploaded  11/18/2022  01/06/2023  Act - Arche  Information lists required docu-	Uploaded by  tmklondi@ncsu.edu  tmklondi@ncsu.edu  eological Reso Yes  ed below by selectin iments below.)	Label  closeProximityTo50YearOldBuilding.attachmentIds  closeProximityTo50YearOldBuilding.attachmentIds  urces  g each check box. (If you have not provided these depth, etc.) and location.	EHP Section A: USGS Map EHP Section A: Historic Buildings document			

#### To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

Any information about potential historic properties, including archeological sites, in the project area. Sources of this information may include SHPO/THPO, and/or the Tribe's cultural resources contact if no THPO is designated. Include, if possible, a map showing the relation of any identified historic properties to the project area.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

Earthwork is anticipated to take place on an area covering approximately 13.1 acres with total excavation volume estimated to equal 22,500 cubic yards. The depth of excavation is variable across the project site, with typical ranges of excavation ranging from 0-4 feet across the limits of work. The past use of the area to be disturbed is a predominantly residential use, with the exception of the Central Middle School site where the limits of work encompass an existing recreational complex (lawn areas surrounding baseball fields).

Please provide an explanation and any information about this project that could assist FEMA in its review.

## **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
EHP Section B Whiteville FEMA BRIC USGS  Map_Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	involve Disturbance Of Ground. attachment Ids	EHP Section B: USGS Map	

C. Endangered Species Act and Fish and Wildlife Cool	rdination Act
Are federally listed threatened or endangered species or their critical habitat present in the area affected by the project?	No
Please confirm that you have provided the information listed below by se section of the <b>application</b> , please provide the required documents either	electing each check box. (If you have not provided these documents in any other through attachment and/or comment box below.)
Information you obtained to identify species in or near the project area. Pro	ovide the source and date of the information cited.
To help FEMA evaluate the impact of the project, please indicate below a	ny other information you are providing. (optional)
Any request for information and associated response from the USFWS, the State Wildlife Agency, regarding potential listed species present and potential	e National Marine Fisheries Service (NMFS) (for affected ocean-going fish), or your tial of the project to impact those species.
Attached materials or additional comments.	
Please provide an explanation and any information about this project that could ass	sist FEMA in its review. (optional)
Please provide an explanation and any information about this project that could ass	sist FEMA in its review.
2. Does your project remove or affect vegetation?	Yes
Please confirm that you have provided the information listed below by se section of the <b>application</b> , please provide the required documents either	electing each check box. (If you have not provided these documents in any other through attachment and/or comment box below.)
Description of the amount (area) and type of vegetation to be removed or a	affected.
A site map showing the project area and the extent of vegetation affected.	
Photographs or digital images that show both the vegetation affected and	the vegetation in context of its surroundings.
To help FEMA evaluate the impact of the project, please indicate below a	ny other information you are providing. (optional)
Attached materials or additional comments.	
Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)	The project location is within a residential area with a history of disturbance. Typical site vegetation includes extensive areas of turf mown right up to the channel edge, residential landscaping, and some areas of forest with a mix of native and invasive species. The proposed stream restoration project includes bioengineering techniques that use native plant species for streambank stabilization as well as restoration of native riparian plant communities (referencing nearby healthy riparian ecosystems).
Please provide an explanation and any information about this project that could ass	sist FEMA in its review.
3. Is your project in, near (within 200 feet), or likely to affect any type of waterway obody of water?	or <b>Yes</b>
If Yes, and project is not within an existing building, you must confirm the any other section of the application, please attach the required document	at you have provided the following: (If you have not provided these documents in ts below.)
✓ A USGS 1:24,000 scale quadrangle map showing the project activities in re	elation to all nearby water bodies (within 200 feet).
Any information about the type of water body nearby including: its dimensi- possible changes to the water body, if any. Identify all water bodies regard	ons, the proximity of the project activity to the water body, and the expected and less whether you think there may be an effect.
A photograph or digital image of the site showing both the body of water are	nd the project area.
To help FEMA evaluate the impact of the project, please indicate below a	ny other information you are providing. (optional)
Evidence of any discussions with the US Fish and Wildlife Service (USFW potential for the project to affect any water body.	S), and/or your State Wildlife Agency concerning any potential impacts if there is the

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

While the primary focus of the proposed scope of work is flood mitigation, the project has been designed to also create and improve the native riparian and aquatic habitat, and is also expected to improve downstream water quality in Soules Swamp and White Marsh. Overall, effects of this project on Mollie's Branch, and to other downstream water bodies, are anticipated to improve hydrologic function and ecosystem services.

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
EHP Section C_Whiteville_FEMA BRIC_Site Map_Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	endangeredSpecies.attachmentlds	EHP Section C: Site map (aerial); photographs including vegetation and primary water body	
EHP Section C Whiteville FEMA BRIC USGS Map Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	endangeredSpecies.attachmentlds	EHP Section C: USGS Map	

## D. Clean Water Act, Rivers and Harbors Act, and Executive Order 11990 (Protection of Wetlands)

1. Will the project involve dredging or disposal of dredged material, excavation, adding fill material or result in any modification to water bodies or wetlands designated as 'waters of the U.S' as identified by the US Army Corps of Engineers or on the National Wetland Inventory?

Yes

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any oth	ıer
section of the application, please attach the required documents below.)	

Documentation of the project location on a USGS 1:24,000 scale topographic map or image.

/	A copy	of a	National	Wetlands	Inventory	map or	other	available	wetlands	mapping	informa	ation

#### To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

Request for information and response letter from the US Army Corps of Engineers and/or state resource agencies regarding the potential for wetlands, and applicability of permitting requirements.

Evidence of alternatives considered to eliminate or minimize impacts to wetland.

Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

Mollie's Branch currently exists as an extensively modified water body. It has been channelized and repeatedly deepened, resulting in the loss of surrounding wetlands. Full restoration to a pre-disturbance state is not possible due to the residential context, but the proposed scope of work will increase the stream's sinuosity, widen the floodplain, and restore some of the wetland areas.

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
EHP Section D_Whiteville_FEMA BRIC_USGS Map_Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	water Body Or Wetland Modification. attachment Ids	EHP Section D: USGS Map	
EHP Section D_Whiteville_FEMA BRIC_WetlandInventory_Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	water Body Or Wetland Modification. attachment Ids	EHP Section D: National Wetland Inventory Map	

## E. Executive Order 11988 (Floodplain Management)

1. Does a Flood Insurance Rate Map (FIRM), Flood Hazard Boundary Map (FHBM), hydrologic study, or some other source indicate that the project is located

Yes

in or will affect a 1% annual chance floodplain, a 0.2% annual chance floodplain, a regulatory floodway, or an area prone to flooding?

Please explain in the text box below and/or provide any documentation to identify the means or the alternatives considered to eliminate or minimize impacts to floodplains (See the 8 step process found in 44 CFR Part 9.6.) to help FEMA evaluate the impact of the project:

This project seeks to naturalize a stream channel that has been previously channelized (with residential and commercial developments subsequently placed in the historic floodplains) as a flood mitigation technique. Various alternatives were considered as part of the project's development. The final schematic plan aimed to minimize impacts to floodplains and other sensitive areas, while also responding to the feedback gathered from community stakeholders. This plan has been analyzed through hydraulic modeling efforts, and is shown to be an effective response to mitigating flood damage in the community.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

2. Does the project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation?

Yes

#### If Yes, please indicate below any other information you are providing to help FEMA evaluate the impact of the project:

- Whydrologic/hydraulic information from a qualified engineer to demonstrate how drainage and flood flow patterns will be changed and to identify down and unstream effects
- Request for information and response letter from the state water resource agency, if applicable, with jurisdiction over modification of waterways.
- Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
EHP Section E Whiteville FEMA BRIC HydraulicSummaryReport Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	affect To Percent Annual Chance Flood plain. attachment Ids	EHP Section E: Hydraulic Summary Report	

#### F. Coastal Zone Management Act

1. Is the project located in the state's designated coastal zone?

No

#### G. Farmland Protection Policy Act

1. Will the project convert more than 5 acres of prime or unique farmland outside No city limits to a non-agricultural use?

## H. Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (Hazardous and Toxic Materials)

- 1. Is there a reason to suspect there are contaminants from a current or past use on **No** the property associated with the proposed project?
- 2. Are there any studies, investigations, or enforcement actions related to the property associated with the proposed project?
- 3. Does any project construction or operation activities involve the use of hazardous **No** or toxic materials?

4. Do you know if any of the current or past land-uses of the property affected by the proposed project or of the adjacent properties are associated with hazardous or toxic materials?

No

I. Executive Ord	ler 12898, Environmental	Justice for Lo	w Income	and Minority	Populations	
1. Are there low income or minority populations in the project's area of effect or adjacent to the project area?  Yes						
If Yes, you must confirm that you have provided the following either in the text box below or by attachment: (If you have not provided these documents in any other section of the application, please attach the required documents or provide the description below.)						
✓ Description of any disproportionate and adverse effects to these populations.						
To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)						
Description of the population affected and the portion of the population that would be disproportionately and adversely affected. Please include specific efforts to address the adverse impacts in your proposal narrative and budget.						
Attached mater	rials or additional comments.					
Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)			No adverse effects to low income or minority populations are anticipated as part of this scope of work. Community stakeholders have been involved and engaged in various public engagement processes connected to the Whiteville Floodprint Plan, and ultimately, this led to consensus around programming preferences and site design considerations.			
Attachments						
Filename	Date uploaded	Uploaded by		Label	Description	Action
J. Other Environmental/Historic Preservation Laws or Issues  1. Are there other environmental/historic preservation requirements associated with No this project that you are aware of?						
2. Are there controversion	al issues associated with this project?		No			
3. Have you conducted any public meeting or solicited public input or comments on Y your specific proposed mitigation project?						
If Yes, please indicate in the text box below a description of the requirements, issues or public involvement effort.			Public presentations, meetings, and engagement events specific to the proposed mitigation project have taken place during: December 2021, April 2022, August 2022, September 2022, and October 2022.			
Attachments						
Filename	Date uploaded	Uploaded by		Label	Description	Action

## K. Summary and Cost of Potential Impacts

Having answered the questions in parts A. through J., have you identified any aspects of your proposed project that have the potential to impact environmental resources or historic properties?

If Yes, you must confirm that you have provided the following: (If you have not provided these documents in any other section of the **application**, please attach the required documents below.)

Yes

- Evaluated these potential effects and provided the materials required in Parts A through J that identify the nature and extent of potential impacts to environmental
- Consulted with appropriate parties to identify any measures needed to avoid or minimize these impacts.
- Made certain that the costs of any measures to treat adverse effects are realistically reflected in the project budget estimate.

Please enter your comments below. (optional): (Please indicate why in the text box below and any information about this project that could assist FEMA in its review).

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action

## **Evaluation**

Is the applicant participating in the Community Rating System (CRS)?

Yes

Select rating.

Is the applicant a Cooperating Technical Partner (CTP)?

No

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

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

Year of building code

2015

2018 North Carolina Codes

Please provide the building code.

Yes

Have the applicant's building codes been assessed on the Building Code

Effectiveness Grading Schedule (BCEGS)?

4

Select rating.

Describe involvement of partners to enhance the mitigation activity outcome.

Partnerships have been and will continue to be integral to enhancing the mitigation outcomes of this project. Organizations that have been regularly engaged in the development of the proposed project and/or are making financial commitments toward this scope of work represent EIGHT (8) PROJECT PARTNERS. These include: the City of Whiteville, Whiteville City Schools, the Whiteville Housing Authority, the Columbus County DREAM Center, the Golden LEAF Foundation, the North Carolina Office of Recovery and Resiliency (NCORR), the North Carolina Division of Emergency Management (NCEM), and the North Carolina State University Coastal Dynamics Design Lab (CDDL). This coalition has provided foundational support to both develop and finance significant portions of the proposed project along Mollie's Branch, and an investment from the FEMA BRIC program will solidify the long-term engagement and participation of members from this cohort through project implementation.

Discuss how anticipated future conditions are addressed by this project.

The "North Carolina Climate Risk Assessment and Resilience Plan" (2020) includes several climate change projections affecting this project: i) the annual total for precipitation is likely to increase; ii) hurricane intensities are likely to increase; and iii) increases in precipitation are likely to lead to an increase in inland flooding. In response to these environmental concerns and to additional "non-climate stressors" included in the 2020 Resilience Plan (e.g., aging infrastructure; socioeconomic disparities) - multiple bioengineering strategies are being used to mimic natural processes in order to reduce the threat of flood-related hazards (FEMA, 2021).

Additional comments (optional)

Please reference the five (5) attachments being provided to support the evaluation of this project. Three (3) of the attachments are most pertinent to the Qualitative Review Criterion: i) Climate Change and Future Conditions (one attachment); and ii) Leveraging Partners (two attachments; including a file which contains three Letters of Support from the following people / organizations: U.S. Congress Member David Rouzer, the North Carolina Office of Recovery and Resiliency, and Whiteville City Schools). Two (2) additional attachments are also provided for Technical Review purposes: a "Scoring

Support" document which includes an overall summary of the proposed project, and a BCEGS Letter from the Insurance Services Office (ISO).

#### **Attachments**

Filename	Date uploaded	Uploaded by	Label	Description	Action
Qualitative Review Climate Change and Future Conditions Whiteville FEMA BRIC Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Evaluation Attachments	Qualitative Review: Climate Change and Future Conditions document	
Qualitative Review Leveraging Partners Whiteville FEMA BRIC Nov2022.pdf	11/18/2022	tmklondi@ncsu.edu	Evaluation Attachments	Qualitative Review: Leveraging Partners document	
Qualitative Review Letters of Support Whiteville_FEMA BRIC_Jan2023.pdf	01/06/2023	tmklondi@ncsu.edu	Evaluation Attachments	Qualitative Review: Letters of Support	
Technical Review BCEGS Letter Whiteville FEMA BRIC_Jan2023.pdf	01/06/2023	tmklondi@ncsu.edu	Evaluation Attachments	Technical Review: BCEGS Letter	
Technical Review Scoring Support_Whiteville_FEMA BRIC_Jan2023_final.pdf	01/17/2023	tmklondi@ncsu.edu	Evaluation Attachments	Technical Review: Scoring Support document	

## **Comments & attachments**

► Community	1 comment, 1 attachments
▶ Mitigation plan	0 comment, 1 attachments
▶ Scope of work	1 comment, 4 attachments
▶ Budget	1 comment, 2 attachments
▶ Cost-effectiveness	1 comment, 7 attachments
▶ Evaluation	1 comment, 5 attachments
▶ Environmental/Historic Preservation (EHP)	0 comment, 8 attachments
▶ Location	0 comment, 3 attachments

#### **Assurances and certifications**

5 View burden statement

## SF-424D: Assurances - Construction Programs

Content:

OMB Number: 4040-0009 Expiration Date: 02/28/2025

Certain of these assurances may not be applicable to your project or program. If you have any questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

- 1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
- 2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

- 3. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of the project.
- 4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
- 5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State
- 6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- 7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
- 8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- 9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
- 10. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C.§§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C.§794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C.§§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (F.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
- 11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- 12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
- 13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C.§874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
- 14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (F.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
- 15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (F.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
- 16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- 17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §\$469a--1 et seq.).
- 18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133. "Audits of States. Local Governments. and Non-Profit Organizations."
- 19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
- 20. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

## Certifications regarding lobbying

OMB Number: 4040-0013 Expiration Date: 02/28/2025

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

- 1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this

- Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- 3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.