

Subapplicant information

Name of federal agency **FEMA**
 Type of submission **Application**

PAMLICO COUNTY

302 MAIN ST
 BAYBORO, NC 28515 United States

State	DUNS #	EIN #
NC	097600456	566000949

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**

Contact information

Subrecipient Authorized Representative (SAR)

Timothy Buck	Primary phone	Mailing address
tim.buck@pamlicocounty.org		

Point(s) of contact

MRS Beth A Bucksot	Primary phone	Additional phones	Mailing address
Director beth.bucksot@pamlicocounty.org	2527453081 Work	2526714562 Mobile	Po Box 776 Bayboro NC 28515
	Fax		

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
ALLIANCE, TOWN OF	137	370404	Y	8	3

Community name	County code	CID number	CRS community	CRS rating	U.S. Congressional District
AURORA, TOWN OF	013	370014	N		3
BATH, TOWN OF	013	370288	N		3
BAYBORO, TOWN OF	137	370183	Y	8	3
BEAUFORT, TOWN OF	031	375346	Y	7	1,2
BELHAVEN, TOWN OF	013	370015	Y	7	1,2
GRANTSBORO, TOWN OF	137	370571	N		3
HAVELOCK, CITY OF	049	370265	Y	8	3
MESIC, TOWN OF	137	370426	Y	8	3
MINNESOTT BEACH, TOWN OF	137	370418	Y	8	3
MOREHEAD CITY, TOWN OF	031	370048	Y	6	3
NEW BERN, CITY OF	049	370074	Y	10	3
ORIENTAL, TOWN OF	137	370279	Y	8	3
STONEWALL, TOWN OF	137	370437	Y	8	3
VANDEMERE, TOWN OF	137	370438	Y	8	3
WASHINGTON, CITY OF	013	370017	Y	7	3

Please provide any additional comments below (optional).

Primary risk to communities is a catastrophic failure of Oriental Lagoon (35° 02'42.32" N76°41'07.10" W) and failing septic systems in areas facing NOAA sea level rise estimates of 3-6 feet over the next century. The mitigation & capacity site is located at Reelsboro/Lee Landing Site (35°06'34.16 N 76°54'23.66" W). Several low income & minority communities are in the path of the these hazards due to flooding, wind driven flooding, & other natural events impacting their locations. Communities lack the resources to address the risks, have provided input & will have additional input on the project. The project will leverage solutions to those hazards for a 5 county coastal region. Most of the communities are located in new Congressional District 3. Hazards will affect much of the coast of North Carolina. If the project is unfunded there will be eventual direct negative impacts to the environmental, health, economic, & social well being to human populations, wildlife, sea life in the Counties of Beaufort, Carteret, Craven, Hyde, & Pamlico. Impacts are expected for the Bay River, Neuse River, Pamlico Sound, Outer Banks, National Seashores at Cape Lookout & Cape Hatteras, US Coast Guard Stations Hobucken & Morehead City, numerous waterways, land, estuaries as well as incorporated & unincorporated communities in the 5 Counties. A few of these communities are New Bern, Fairfield Harbor, Marine Corps Air Station Cherry Point, Down East Carteret, Beaufort, Bridgeton, Minnesott Beach, Bayboro, Alliance, Stonewall Oriental, Janerio, Maribel, Mesic, Vandemere, Reelsboro, Grantsboro, Mesic, Lowland, Hobucken, Arapahoe, Florence, Whortonsville, River Dunes, Janerio, & adjoining areas as well as areas off of Keystown, Prescott, Savannah, Lee Landing, Neuse, Scott Store, Rand Moore's Swamp Roads, Aurora, Washington (NC), Swan Quarter, Belhaven, Bath, Ocracoke, Hatteras, other communities & towns along the Neuse River, Bay River, Pamlico Sound, Atlantic Ocean, and Outer Banks. Most of the Sewer District is in a Census Designated NC Opportunity Zone with higher than state & national average of vulnerable poverty & minority populations. Areas that were historically not susceptible to flooding/water table rise are now vulnerable & reporting impacts to septic systems in traditionally non flooding areas. These areas contain residents in need of sewer connections. Pamlico County households to receive immediate benefit will be 1,900 (out of 7,600 homes) homes on step tanks plus 500 (out of 7600) homes on a gravity feed equating to 4500 persons. Once the projects are complete, a minimum of 200-500 homes or 450 – 1000+persons & 50+ businesses can be added to the Bay River Metro Sewer service district. It will also protect service for existing & future business & residential growth. Protecting the waterways from the potential for contamination will impact up to 90% population of Pamlico County and 181,000 people in a 5 county

region. See attached NC Department of Transportation (NCDOT) Environmental Justice Map with much of district with poverty statistics of 53% and 66% minority. See attached: - Technical Scoring Support Sheet - Templet Outreach Activities -Pamlico County DSS 10-22-22 Numbers & SVI index for Justice 40 Backup -Opportunity Zone Census Tract Number -HUD Home Income Limits... page 4- delineates low income levels for Pamlico, Craven, Jones Counties. -SVI score of .86 on a 0-1 scale. This project will impact SE Beaufort County which abuts Pamlico County on its northern border and has a high SVI. -Google Maps of impact areas for Counties, - Google Map of Impact area for the State of North Carolina & the East Coast of the USA, -Flood map of sewer line areas -Google map of impaired Oriental Lagoon location coordinates -NOAA Sea Level Rise Estimates for East Coast of USA -PowerPoint - includes community lifelines & nature based solutions for community -Environmental Justice Map

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
3 Map of BRMSD Impact to State and East Coast GoogleEarth_Image.jpg	11/16/2022	beth.bucksot@pamlicocounty.org	Community Attachments	Map shows the impact to the NC Coastal and eastern seaboard area for a catastrophic Oriental Lagoon failure and failing septic systems.	
Hyde County Demographics.pdf	01/04/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Hyde County Population Demographics	
PC Flood Map with Sewer lines.pdf	11/16/2022	beth.bucksot@pamlicocounty.org	Community Attachments	Shows flood zone areas including communities with potential of current and future failing septic systems.	
Oriental Wastewater Lagoon Coordinates and Impact.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Oriental Lagoon impact zone and location coordinates	
Environmental Justice Factors NC DOT Map.png	01/05/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Shows NC DOT designated environmental justice Poverty minority Opportunity Zone statistics within the Sewer District's northern zone.	
DSS Data for Justice 40 backup 10-22 Board Numbers.xlsx	01/05/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Justice 40 low income and minority data from NC DoT	
NOAA Regional Sea Level Rise 2022.docx	01/05/2023	beth.bucksot@pamlicocounty.org	Community Attachments	NOAA sea level rise estimates	
HUD HOME_IncomeLmts_State_NC_2022(1).pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Income limits and poverty levels	
BRIC2022-Population Impacted.docx	01/06/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Total population impacts	
BRIC2022-Template-Future Conditions.docx	01/06/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Future conditions	
InkedGoogleEarth_Image(002).jpg	11/16/2022	beth.bucksot@pamlicocounty.org	Community Attachments	Map shows direct impacts to Communities, National Seashores, waterways in counties of Craven, Carteret, Beaufort, Hyde and Pamlico.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
CensusNC Opportunity Zone Low Income Areas.docx	12/19/2022	beth.bucksot@pamlicocounty.org	Community Attachments	Shows designated Low Income minority Opportunity Zone within the Sewer District	
Beaufort County Population Demographics.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Community Attachments	Impacted Beaufort County demographics	
Carteret County Population Demographics.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Community Attachments	Impacted Carteret County demographics	
Craven County Population.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Community Attachments	Impacted Craven County demographics	
Pamlico County Population Demographics.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Community Attachments	Impacted Pamlico County demographics	
BRIC2022-Pamlico-SVI.pdf	01/20/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Social Vulnerability Index of .86	
Pamlico OppZone Census Tract number.docx	01/22/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
NOAA Sea Level Rise Estimates for East Coast of USA.pdf	01/22/2023	beth.bucksot@pamlicocounty.org	Community Attachments	NOAA Sea Level Rise documentation of impacts to communities	
BRMSD 2022 BRIC LOI PPoint.pptx	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	Project PowerPoint, impacts, lifelines, nature based solutions, pictures.	
BRIC2022-Template-Outreach Activities.docx	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
2 Technical Scoring Support .docx	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
BRIC 2022 Pamlico County Letter of Support.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
Grantsboro BRIC Pamlico Co Bay River Letter Support.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
Letter of Support - Pamlico Co. - BRIC Grant Appl. - 23.01.04.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
Minnesott Beach BRIC Pamlico Co Support letter 1-3-22.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
Town of Mesic BRIC Letter of Partner Support Pam Co Bay River M.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
PC Soil and Water Partner Letter of Support.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
Vandemere Partner Letter of Support Pamlico County BRIC.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	
ECCOG Partner Letter of Support - 2022 BRIC Grant 1-4-23.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Community Attachments	<i>No description given.</i>	

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

Pamlico Sound Regional Hazard Mitigation Plan

State Multi-Hazard Mitigation Plan (Enhanced)

06/15/2020

Proposed activity description

Bay River Metropolitan Sewer District (BRMSD) Facultative Lagoon System Renovation & Capacity Upgrades project will mitigate against impacts of a catastrophic failure of the Oriental Lagoon & restore its capacity. It will increase sewer new capacity in order to reduce flooding contamination related to failing septic systems, address future conditions, and provide for future growth. This project responds to hazards identified in the Pamlico Sound Hazard Mitigation Plan. The focus is on deemed "high" or "moderate" priority hazards for the planning area, as determined through risk & vulnerability assessments. The plan followed planning process prescribed by FEMA, & was developed under the guidance of a HMPC comprised of representatives of County & Town departments; citizens; & other stakeholders. The HMPC conducted a risk assessment that identified & profiled hazards that pose a risk to the planning area, assessed the planning area's vulnerability to these hazards, & examined each participating jurisdiction's capabilities in place to mitigate them. The hazards profiled in the plan pertaining to this project include: Coastal Hazards (Erosion & Rip Current) Dam & Levee Failure Flood Hurricane & Tropical Storm Severe Weather (Thunderstorm Wind, Lightning, & Hail) Severe Winter Storm BRMSD Renovation and Capacity Upgrades project will prevent a catastrophic failure of a wastewater lagoon located within a flood zone, with a history of flooding, & prevent thousands of gallons of raw sewage from entering & contaminating creeks & neighborhoods. Lagoon location 35° 02'42.32" N76°41'07.10" W see attached Oriental Lagoon Location Google Map. A lagoon failure & failing septic systems will directly impact Pamlico County, 4 surrounding counties, towns, the Intracoastal Waterway, Bay River, Neuse River, Pamlico Sound, US Coast Guard Station Hobucken, National Seashores Cape Lookout and Cape Hatteras, farmland, & numerous towns, tributaries and estuaries. Expanded sewer capacity is necessary to provide sewer connections to unsewered communities with failing or flooding septic systems & to prevent them from contaminating groundwater, waterways, and land. Expansion will enable environmentally sound, affordable, & resilient housing, community & economic development. This will increase the ability to locate residents to areas within the County located outside a flood zone. The first section of the project is the repair of the lagoons existing dykes, placement of fill to increase lagoon depth, installation of surface aerators & floating baffle curtains to convert the existing facultative lagoon system to a partial mix aerated lagoon to prevent its failure & to restore treatment capacity from 200,000 gpd to 400,000 gpd. Currently 200,00 gpd of capacity is being diverted to the Bayboro Lagoon putting it at risk & near capacity while leaving little remaining sewer capacity for the entire county. Engineering Plan & permits are on hand- see attached Engineering + Design Plan & Permit. The budget in 2014 was \$1,379,500. Inflation and supply chain changes bring the new estimates to \$3,000,000. The 2nd part of the project includes the purchase of approximately 165 acres of land. This is adjacent to the recent acquisition of land off of Lee Landing Road in Reelsboro to replace the damaged Arapahoe spray site. New location of the Reelsboro/Lee Landing Rd expansion mitigation site °06'34.16 N 76°54'23.66" W - see attached Reelsboro Site Google Map. These sites will be combined creating a spray site of nearly 300 acres for treated wastewater & the infrastructure for the mitigation & expansion. The soils & height of the sites make them suitable. Engineering & permitting are in process. This section of the project will include maintaining greenway areas & environmentally friendly & sustainable wastewater practices. The property acquisition would be \$700,000+ & the beginning development of system infrastructure cost estimate is \$6,000,000+.

Please provide any additional comments below (optional).

Additional mitigation plans are attached 1. RebuildNC-Pamlico Plan Hurricane Matthew Resilient Plan Redevelopment was completed after Hurricane Matthew struck NC. It is part of a statewide mitigation project. 2.State of North Carolina Hazard Mitigation Plan Final As Adopted pdf is a statewide hazard mitigation plan. BRIC PowerPoint attached shows lifelines and nature based solutions, and additional details of mitigation impacts.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Updated20Soils20Hydrogeological20092815.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Adjacent site in Reelsboro	
State of North Carolina Hazard Mitigation Plan Final As Adopted.pdf	10/27/2022	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	State Centric Hazard Mitigation Plan	
Oriental Wastewater Lagoon Coordinates and Impact.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Oriental Wastewater Lagoon Coordinates Google Map	
Reelsboro-Lee Landing Rd Site Coordinantes Location.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Google Map & Coordinates for Mitigation and Expansion Site in Reelsboro on Lee Landing Rd.	
Pamlico Sound Regional Hazard Mitigation Plan Final 2020.pdf	10/27/2022	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Regional Hazard Mitigation Plan for Beaufort, Carteret, Craven, and Pamlico counties	

Filename	Date uploaded	Uploaded by	Label	Description	Action
RebuildNC-Pamlico Plan Hurricane Matthew Resilient Redevelopment Plan.pdf	10/27/2022	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	State and Pamlico Mitigation Plan for Pamlico County. This is part of an overall NC State plan	
BRIC2022-Template-Future Conditions.docx	01/06/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Future conditions	
BRIC2022Leveraging Partners.docx	01/06/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Partners	
BRIC2022 Implementation Measures.docx	01/06/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Implementation measures	
BRIC2022-Template-Outreach Activities.docx	01/06/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Outreach	
BRMSD 2022 BRIC PPoint.pptx	01/06/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Mitigation PowerPoint	
Weyerhaeuser Track SoilsEvaluation.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Mitigation Plan Attachments	Mitigation site in Reelsbor soils evaluation	

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)

Bay River Metropolitan Sewer District Facultative Lagoon System Renovation and Capacity Upgrades

Activities

Primary activity type

Utility and infrastructure protection

Primary sub-activity type

Wastewater and/or sanitary sewer system

Primary sub-activity type

Wastewater and/or sanitary sewer system

Secondary activity type (Optional)

Mitigation reconstruction

Tertiary activity type (Optional)

Geographic areas description

The project lies on the central section of the East Coast of the United States, and is more specifically located on the central Inner Banks of North Carolina in the County of Pamlico. The County seat of Bayboro is located at 35.1429° N, 76.7702° W The failing Oriental Lagoon system is located slightly Northwest of the Town of Oriental at 35° 02'42.32" N76°41'07.10" W Currently, 200,00 gpd is being diverted from the Oriental Lagoon to reduce the imminent risk of catastrophic failure of the Oriental Lagoon during a storm. This has greatly reduced sewer capacity for the entirety of Pamlico County and burdens the Bayboro Wastewater Lagoon. The threatening potential of a wastewater lagoon failure and failing septic system impacts communities located along the Neuse River, Bay River, Pamlico Sound, Outer Banks, Intracoastal Waterway and surrounding counties of Beaufort, Craven, Carteret, and Hyde. Primary risk to communities is Oriental Lagoon Coordinates 35°02'42.32" N76°41'07.10" W The additional risk is failing septic systems in areas that are facing sea level rise -See attached NOAA Sea Level Rise Estimates. The mitigation and capacity site is located at Reelsboro/Lee Landing Site- Coordinates 35°06'34.16 N 76°54'23.66" W see attached Reelsboro Site Google map. The communities impacted are located in the new Congressional District 3 but the long term impact will affect the coast of North Carolina and beyond into the Atlantic Ocean. If the project continues to be unfunded there will be direct negative impacts to the environmental, health, economic, and social well being to human, wildlife, sea life populations in a 5 county region and its waterways. Anticipated direct

negative impacts are to Bay River, Neuse River, Pamlico Sound, National Seashores at Cape Lookout and Cape Hatteras, US Coast Guard Stations Hobucken and Morehead City, plus numerous waterways, land, estuaries as well as incorporated & unincorporated communities in the 5 Counties. Some of these include New Bern, Fairfield Harbor, Marine Corps Air Station Cherry Point, Down East Carteret, Town of Beaufort, Bridgeton, Minnesott Beach, of Bayboro, Alliance, Stonewall Oriental, Janerio, Maribel, Mesic, Vandemere, Reelsboro, Grantsboro, Mesic, Lowland, Hobucken, Arapahoe, Florence, Whortonsville, River Dunes, Janerio, and adjoining areas as well as areas off of Keystown, Prescott, Savannah, Lee Landing, Neuse, Scott Store, Rand Moore's Swamp Roads, Aurora, Washington (NC), Swan Quarter, Belhaven, Bath, Ocracoke, Hatteras, as well as all other communities and towns along the Neuse River, Bay River, Pamlico Sound, Atlantic Ocean, and numerous waterbodies located in the counties of: Pamlico, Craven, Beaufort, Carteret, Hyde, and the Outer Banks of North Carolina. Many of those located in BRMS District are disadvantaged are SVI .86 risk communities. A large section of the area served by Bay River Metropolitan Sewer District is in a Census Designated NC Opportunity Zone with significantly higher than state & national average of poverty & minority populations. Areas that were historically not susceptible to flooding or water table rise are now vulnerable & reporting issues impacting septic systems in traditionally non flooding areas. These areas contain residents in need of sewer connections. Current Pamlico County households to receive immediate benefit will be 1,900 (out of 7,600 homes) homes on step tanks plus 500 (out of 7600) homes on a gravity feed which equates to 4500 persons. Once the 2 projects are complete, a minimum of 200-500 homes or 450 – 1000 persons and 50+ businesses will be enabled to be added to the Bay River Metro Sewer service district. It will also protect service for existing & new business & residential growth. Protecting the waterways from the potential for contamination will impact up to 90% of Pamlico County population and 181,000 people in the 5 county region. See attached NC Department of Transportation (NCDOT) Environmental Justice Map with poverty statistics of 53% in the district verses 23% for the State of NC. District is 66% Minority verses the State of NC 32%. See attached Pamlico County Department of Social Services Data for Justice 40 Backup 10-22-22 Board Numbers and attached HUD Home Income Limits... specifically page 4- delineates low income levels for Pamlico, Craven, Jones Counties. Please see attached: Google Maps of impact areas for Counties, Google Map of Impact area for the State of North Carolina and the East Coast of the USA, Flood map of sewer line areas- shows the need for expansion in low lying low wealth areas, Google map of impaired Oriental Lagoon location coordinates NOAA Sea Level Rise Estimates SVI Estimates

Community lifelines

Primary community lifeline

Hazardous material

Primary sub-community lifeline

HAZMAT, pollutants, contaminants

Secondary community lifeline (optional)

Health and medical

Secondary sub-community lifeline

Public health

Tertiary community lifeline (optional)

Hazard sources

Primary hazard source

Infrastructure failure

Secondary hazard source (optional)

Dam/Levee break

Tertiary hazard source (optional)

Flooding

Is this a phased project?

No

Are you doing construction in this project?

Yes

Percentage of population impacted

90

Provide detailed description of population impacted

The majority of the county & a large section of the region will be impacted by the project due to the scope of the risk. A catastrophic lagoon failure in Oriental plus current & future failing septic systems in low wealth areas would affect waterways, drainage areas, fishing & recreation for several counties. This would impact the environment, health, economics, farms & fishing grounds. The secondary impact on farms and fishing grounds will be valued added food production carried out in the region. Much of the hazard area is located in areas with low income & minority populations. These communities will receive substantial benefits from this project. Some of those benefits include: options to tap onto sewer at affordable rates, reduction of mold & other environmental hazards. Other benefits are the protection of gardens, farmland marine life seafood used to supplement food sources; increasing the sustainability & resiliency of neighborhoods; and creating options for appropriate housing, economic & community development projects that are in keeping with location. Protecting existing sewer infrastructure, while adding capacity for unsewered properties and future housing and business development will touch the lives of those who live within the County as well as those from SE Beaufort County and Hyde County's town of Ocracoke who come to Pamlico County for health care, shopping and educational needs. Nearly 1/3 of Bay River Metropolitan Sewer District is located within an NC Opportunity Zone- see attached NC Opportunity Zone document. The disadvantaged communities of Bayboro, Maribel, Mesic, Vandemere, lie within that zone. Also see attached NC Department of Transportation (NCDOT) Environmental Justice Map with poverty statistics of 53% in the district verses 23% for the State of NC. District is 66% Minority verses the State of NC 32%. See attached Pamlico County Department of Social Services Data for Justice 40 Backup 10-22-22 Board Numbers and attached HUD Home Income Limits... specifically page 4- delineates low income levels for Pamlico, Craven, Jones Counties. Other disadvantaged communities include sections of Florence, Oriental, Janerio, Reelsboro and unincorporated areas scattered across the County of Pamlico. Approximately 42% of Pamlico County is Low-Moderate Income families with 22% reporting income below poverty level. Nearly 70% of the children in the local school systems are eligible for free or reduced lunch. Of a population of 12,756, in October of 2022 1,922 were receiving nutritional (SNAP) benefits and 3,192 receive Medicaid benefits. - see attached DSS Board Numbers Data. Some of the communities fall under the Justice 40 guidelines. The community of Harlowe in Carteret County is also a minority and low income community and falls under Justice 40 guidelines. Approximately 40% of Pamlico County's square mile land area is covered by a FEMA designated Special Flood Hazard Area. This indicates that over 40% of the ~13,000+ population is impacted by a flooding event. However, our GIS and planning counts, not including visitors or second homes, indicate that the population is possibly over 16,000. It is our goal to encourage new development out of flood zones & to give citizens a place to relocate. Several communities in Pamlico and surrounding region fall under the Justice 40 guidelines. Additional impacts for communities along waterways in these counties: Craven County- Havelock, James City, Bridgeton, Fairfield Harbor, Marine Corp Air Station Cherry Point... Population impact estimate of 70,000+ Carteret County- Down East Carteret, Harlowe (minority Justice 40 community), Cedar Island and Cedar Island Wildlife Refuge, Town of Beaufort, Morehead City, Cape Lookout National Seashore, Atlantic, Marshallburg... Population impact estimate of 53,000+ Beaufort County- Bath, Aurora, Spring Creek, Washington, Belhaven, Bayview... Population impact estimate 38,000 Hyde County- Swan Quarter, Ocracoke Island, Middletown, Engelhard, Gull Rock Gameland... Population impact estimate 4,000+ Total regional population impact estimate of: 181,000 Public meetings and input have been carried by Bay River MSD and by the Pamlico Sound Hazard Mitigation Committee, and more will be held during the project process. Those meetings will be held at town halls, the library or other public meeting spaces easily accessible to the public. See attached notice for example. Nature based solutions will benefit the population and ecosystem: Bioretention areas; Permeable roads and infrastructure where possible; Application field will protect trees from being harvested thus protecting the natural environment, creating wind barriers for the surrounding communities and protect groundwater and waterways. Community Lifelines to be aided for the populations are: -Security and Safety- the project will protect the safety of communities by reducing the risk of a lagoon failure during a catastrophic event. This will prevent nearby neighborhoods, waterways, and water treatment facilities from being flooded by raw sewage. -Food and Water- the project will protect ground and drinking water and for communities across Pamlico County. It protects the use of, and access to environmentally sound seafood and agricultural products. -Health and Medical – the project will protect the health and well-being of people,

Provide a clear and detailed description of your proposed activity

their environment, and animals by preventing disease and its spread from exposure to raw sewage. It will also help to protect emergency access to the areas surrounding the lagoon and prevent bio blooms and toxins that might affect the health of residents, waterways, and wildlife. -Energy- preventing lagoon failure will enable post storm access by utilities to the areas surrounding the lagoon. -Communications and transportation- preventing lagoon failure and expanding sewer capacity will help to prevent raw sewage flooding roads and communications infrastructure. This will protect emergency response to the area.

In order to prevent catastrophic failure of the Oriental Lagoon, part 1 will be the repair of existing dykes, placement of fill to increase lagoon depth, installation of surface aerators and floating baffle curtains to convert the existing facultative lagoon system to a partial mix aerated lagoon to prevent a lagoon failure and to increase/restore the treatment capacity from 200,000 gpd to 400,000 gpd. Engineering Plan and permits are on hand (see attached Engineering + Design Plan and Permit). Currently one half of Oriental Lagoon's capacity is being diverted to the Bayboro Lagoon. This puts that Lagoon at long term risk during a storm event and has put current capacity used for the whole county at 90%. The original budget in 2014 was for \$1,379,500. Since that time materials and labor costs have soared as a result of inflation and shortages. New estimates of the cost of this section of the project are expected to be \$3,000,000. The secondary project activity is the purchase of approximately 165 acres of land adjacent to the recent purchase of land as a replacement site for the damaged Arapahoe spray site. This will include creating a spray site for treated wastewater and the infrastructure for the capacity expansion to take on new addresses with failing septic systems. An agreement for an option to purchase the 165 acres has been struck between the property owner, Steven Benjamin and Bay River Metropolitan Sewer District (BRMSD) and is contingent on BRMSD/Pamlico County being awarded a 2022 BRIC grant. Pamlico County Government has already contributed \$500,000 to Bay River Metropolitan Sewer District for its use on the project. Engineering and permitting is in process of development by Stroud Engineering for the recent land acquisition to replace the damaged Arapahoe spray site and for the additional 165 acres to be purchased from Mr. Benjamin. This section of the project will include maintaining greenway areas and environmentally friendly and sustainable wastewater practices. Maintaining the trees on the site will also provide a wind break for the Reelsboro Community during some storm events and provide proper uptake of spray. The additional benefit will be a sheltered area for wildlife. The property acquisition will be \$700,000 and the development of system infrastructure cost estimate is \$6,000,000. Bay River Metropolitan Sewer District and the County of Pamlico are in dire need of this expanded capacity in order to provide new sewer connections to unsewered communities, to prevent failing or flooded septic systems from contaminating groundwater and waterways. New sewer connections for environmentally sound and affordable community and economic development and resiliency are also necessary. This project creates beneficial mitigation, health, economic, and environmental impacts for the 4 additional counties, communities, and waterways in Craven, Carteret, Beaufort, Hyde and the Outer Banks. Nature based solutions Bioretention areas; Permeable roads and infrastructure where possible; Application field will protect trees from being harvested thus protecting the natural environment, creating wind barriers for the surrounding communities and protect groundwater and waterways. Community Lifelines to be aided are: -Security and Safety- the project will protect the safety of communities by reducing the risk of a lagoon failure during a catastrophic event. This will prevent nearby neighborhoods, waterways, and water treatment facilities from being flooded by raw sewage. - Food and Water- the project will protect ground and drinking water and for communities across Pamlico County. It protects the use of, and access to environmentally sound seafood and agricultural products. -Health and Medical – the project will protect the health and well-being of people, their environment, and animals by preventing disease and its spread from exposure to raw sewage. It will also help to protect emergency access to the areas surrounding the lagoon and prevent bio blooms and toxins that might affect the health of residents, waterways, and wildlife. -Energy- preventing lagoon failure will enable post storm access by utilities to the areas surrounding the lagoon. -Communications and transportation- preventing lagoon failure and expanding sewer capacity will help to prevent raw sewage flooding roads and communications infrastructure. This will protect emergency response to the area.

How will the mitigation activity be implemented?

Mitigation activity will be overseen by Bay River Metropolitan Sewer District and its engineering firm. • Step 1 Engineering Plans update for Oriental

Lagoon and steps to acquiring Hood/Holton/Benjamin tract for expansion • Step 2 Additional Public hearings for communities to be held in central locations of towns and other public meeting areas. • Step 3 Finalize Hood/Holton/Benjamin tract purchase and continue engineering work contracts and contractor bids • Step 4 Site prep • Step 5 Oriental Lagoon repair and finalize capacity expansion engineering plans and permits • Step 6 Once Oriental Lagoon is repaired, continue Hood/Holton/Benjamin tract expansion project engineering and permitting process and develop infrastructure for site in order to create capacity to add failing septic systems and aid growth. Step 7 Begin construction on the 165 acre Hood/Holton/Benjamin tract and connect to the adjacent and recently purchased Weyerhaeuser tract in development to replace the damaged Arapahoe spray field. Step 8 Finalize construction of station and lines. Once the project is completed Bay River Sewer District will revert flow back to the Oriental Lagoon and reduce the pressure on the Bayboro Lagoon and will pump the Oriental Lagoon treated wastewater to the spray site on Lee Landing Road to protect capacity. The process of adding Still Waters, Sail Haven, and Blackwell Loop subdivisions to district service and begin plans to add additional areas NE Pamlico County. Next it will begin process of adding Breighmere Rd, Chair Rd, Lee Landing, and other Reelsboro area to district service to provide access for failing septic systems and to expand development in areas located outside of flood zones. We have included of sub-recipient management costs (SRMC) our request for • Solicitation, review, and processing of subapplications and subawards • Subapplication development and technical assistance to subapplicants regarding feasibility • 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 above This complies with the NOFO requirement that "Subapplicant management cost activities must be added to the Scope of Work section and identified as a line item in the Cost Estimate section of subapplications in FEMA GO."

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 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.):

The project is feasible due to the engineering & planning already in place the capable experience of those managing the project. It will be overseen by Bay River Metropolitan Sewer District's Director, Eric Harper. He has numerous credentials and years of experience in wastewater management, projects and grant projects. Stroud Engineering is overseeing the design, permitting & construction of projects. Pamlico County Building Inspections Director, Ray Bennett is qualified to ensure compliance with building regulations & that permits are in place. The County Finance & Planning/Economic Development Directors, Bill Fentress (finance) & Beth Bucksot & are experienced in project development & grants administration. Following Hurricane Florence at least 3 Pamlico County residents & several from surrounding counties died as a result of infections related to water born hazards from flood waters containing contaminants & biological hazards from those failing systems. Homes, businesses, waterways, national seashores, estuaries, & farmland in the 5 county region will benefit from a reduction of those hazards. Flood waters are always detrimental, but biological hazards in flood waters cause more long term destruction & ongoing mold related health impacts. Bay River Metropolitan Sewer District's (BRMSD) Oriental Wastewater Treatment Plant is located outside of the Town of Oriental at 790 White Farm Road (SR 1349), Latitude: 35.045353° and Longitude: -76.685403°. The facility is currently permitted for 200,000 gpd using facultative lagoon treatment. In 2016 the facility was permitted for a capacity of 400,000 gpd conditioned upon conversion from facultative lagoons to partial mix aerated lagoons. The lagoons walls have eroded & settled since its construction in 1984 due to damages from storms. This led BRMSD to receive Notice of Violations for excessive erosion of the dike walls & for exceeding the freeboard limits in the treatment lagoon. It forced a diversion of wastewater to the Bayboro Lagoon which severely limited sewer capacity for the entire County. The Oriental treatment facility is located in the 500-year flood zone, but site has been impacted by Hurricanes Fran, Floyd, Irene, Isabelle, Matthew, Dorian, Florence, Tropical Storm Dennis & other major Northeasters. Each storm has lead to continued breakdown & created the risk of failure & notice of violations. In order to prevent potential catastrophic failure of the Oriental Lagoon, the first step must be the repair of existing dykes, placement of fill to increase lagoon depth, installation of surface aerators & floating baffle curtains to convert the existing facultative lagoon system to a partial mix

aerated lagoon to prevent the lagoon failure & to increase the treatment capacity from 200,000 gpd to 400,000 gpd. This project will convert the facultative lagoon to a partial mix aerated lagoon by installation of surface aerators & floating baffle curtains. The erosion & settlement of the dyke walls will be repaired & raised to increased capacity. This will mitigate the possibility of raw sewage overtopping the dykes & prevent failure of the dyke walls. Engineering Plan and permits are on hand (see attached Engineering + Design Plan and Permit). The original budget in 2014 was for \$1,379,500. Materials & labor costs have soared since that time. New cost estimates for the Oriental Lagoon repairs are expected to be \$3,000,000. The site for capacity expansion to provide connections for failing septic systems & for disaster resilient development will include the purchase of approximately 165 acres of land for expansion of capacity. This will include creating a spray site for treated wastewater & the infrastructure for the expansion. Engineering & permitting are in process of development. This section of the project will include maintaining greenway areas & environmentally friendly & sustainable wastewater practices. Putting the expansion site in this area will greatly reduce risks, keep the project out of a flood zone & enhance sewer capacity for the next 25 years. The property acquisition would be approximately \$700,000 & the development of system infrastructure cost estimate is \$6,000,000. The project budget will include Subrecipient Management Costs of \$103,500 for:

- Solicitation, review, & processing of subapplications & subawards
- Subapplication development and technical assistance to subapplicants regarding feasibility and effectiveness and BCA
- Geocoding hazard mitigation projects identified for further review by FEMA
- 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 & travel expenses, & professional development that is directly related to the implementation of HMA programs
- Staff salary costs directly related to performing the activities listed above

Bay River Metropolitan Sewer District will contribute to any additional management costs. The County of Pamlico staff will contribute to management costs by providing the services of its Planning and Economic Developer & Finance Department to Bay River MSD as needed for grant solicitation, review, & processing of subapplications and subawards. This complies with the NOFO requirement that "Subapplicant management cost activities must be added to the Scope of Work section and identified as a line item in the Cost Estimate section of subapplications in FEMA GO." development and technical assistance to subapplicants regarding feasibility and effectiveness and BCA Nature based solutions: Bioretention areas; Permeable roads & infrastructure where possible; Application field will protect trees from being harvested which protects the natural environment, creates wind barriers for the surrounding communities, & protects groundwater and waterways. Community Lifelines to be aided by project are:

- Security and Safety- the project will protect the safety of communities by reducing the risk of a lagoon failure during a catastrophic event. This will prevent nearby neighborhoods, waterways, & water treatment facilities from being flooded by raw sewage.
- Food & Water- the project will protect ground and drinking water and for communities across Pamlico County and the region. It protects the use of, and access to environmentally sound seafood and agricultural products.
- Health and Medical – the project will protect the health and well-being of people, their environment, and animals by preventing disease and its spread from exposure to raw sewage. It will also help to protect emergency access to the areas surrounding the lagoon and prevent bio blooms and toxins that might affect the health of residents, waterways, and wildlife.
- Energy- preventing lagoon failure will enable post storm access

Bay River Metropolitan Sewer District and the County of Pamlico are in dire need of this expanded capacity in order to provide new sewer connections to unsewered communities, to prevent failing or flooded septic systems from contaminating groundwater and waterways as well as sewer connections for environmentally sound and affordable community and economic development and resiliency. See attached:

- Oriental Lagoon engineering documents and permit
- BRMSD Permits
- Hood Tract/Steven and Helen Benjamin documents-
- for 165 acre expansion spray site
- Building Codes Effectiveness GC documentation
- Flood Damage Prevention Ordinance
- BCA documentation contains supporting engineering documentation of damages, flood zone, past issues, NOAA maps, other maps, and budget details.
- Maintenance Schedule
- Project Schedule

Who will manage and complete the mitigation activity?

Bay River Metropolitan Sewer District will be the lead on project management and implementation and provide required cost share funds by self-funding or other grant sources. The County of Pamlico will be the applicant and provide grant and technical assistance, permits, inspections and assist in other areas as necessary.

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

The project will address the 2 major hazards of the potential for a catastrophic failure of The Oriental Lagoon system as well as present and future failing septic systems. Specifically, The Oriental Lagoon renovations will immediately reduce the hazard risk to 181,000 people(5 county area), waterways, environment, wildlife, marine life, and farmland in 5 counties, one port, 2 Coast Guard Stations, and at 2 National Seashores. Expanding capacity on a site out of the flood plain in order to serve failing septic systems within a flood plain will provide environmental and health benefits and reduce hazard risk to humans, wildlife, marine life estuaries, and farmland. Currently, leaching systems impact waterways and during heavy rain events or wind driven high water can add to algae blooms and higher levels of nitrogen and bacterial contamination to ground water and waterbodies. Pamlico County alone has 66 named waterbodies. The risks that remain will be those who have not connected to sewer options or remaining areas that cannot be connected yet. The greatest hazard risk is in not completing the project. The residual risk would be if the entire county were to be flooded or residents who may try to refuse use of sewer options. This project is to prevent the hazard of a catastrophic failure of a wastewater lagoon located within a flood zone, with a history of flooding, and to prevent hundreds of thousands of gallons of raw sewage from entering and contaminating creeks, rivers, and neighborhoods. It also addresses failing septic systems that leach into groundwater and makes its way to numerous waterbodies in Pamlico County and the region. The County of Pamlico is in dire need of expanded sewer capacity to provide connections to unsewered communities to prevent failing or flooded septic systems from contaminating groundwater and waterways as well sewer connections for environmentally sound and affordable community and economic development and resiliency. As storm numbers and intensity increase, and sea level continues to rise, Eastern North Carolina and Pamlico County are at the forefront of bearing the brunt of these forces. We have seen an increase in flooding in low lying areas, and other areas that historically did not flood are now flooding. This has resulted in failing septic systems for unsewered households and businesses. Yet, the area is growing and is an agricultural and aquaculture breadbasket for North Carolina and the United States. The project will address the sewage needs that currently exist and prepare us to face present and future growth while addressing sea level rise and increased storm intensity. This project will strengthen a sewer lagoon and prevent catastrophic failure while enhancing sewer capacity for present and future neighborhood, business, state facility, Coast Guard Station, local government and educational needs. Additionally, the new application field will protect trees from being harvested thus protecting the natural environment, creating wind barriers for the surrounding communities and protect groundwater and waterways. Nearby Cherry Point Marine Corps Naval Air Station is expanding. This has resulted in new residents and businesses moving to Pamlico County and additional ones on the way. Addressing present and future sewer needs will enable the County to better serve those families and businesses and contribute to the overall demands on the region.

Does the mitigation activity incorporate nature-based solutions?

Yes

When will the mitigation activity take place?

We anticipate that the grant would be awarded in 2024. Once grant contracts are finalized, the Oriental Lagoon repair will be the top priority and will be started as soon as is contracting and procurement allow. Our goal, contingent on availability of contractors, equipment, and materials, will be to repair the lagoon by or in early hurricane season. A prior repair project is in process for the western end of Pamlico as well. This project will tie in with the purchase of property for sewer expansion listed in this grant application. The purchase of the additional 165 acres will begin as soon as the state contract allows. This will provide for the expansion of sewer capacity to provide additional connections for failing septic systems and future environmentally sound growth. Our goal is to carry out the project as quickly as possible while dealing with current climate of backlogged supply chains and contractor labor. Pending BRIC award timing we estimate that the project will fully start by January or February of 2025. The schedule is attached.

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?

This project is the best alternative to protect the local and state infrastructure, environment, health, and marine wildlife. Other alternatives were considered but were not feasible due to environmental concerns and

excessive costs. This project will aid in preventing current and future environmental contamination, impacts to the health of people, wildlife, and waterways as well as drinking water sources. The project is needed in order to prevent a potential catastrophic failure of a wastewater lagoon located within a flood zone, with a history of flooding, and to prevent hundreds of thousands of gallons of raw sewage from entering and contaminating creeks and neighborhoods. Bay River Metropolitan Sewer District and the County of Pamlico are in dire need of expanded capacity to provide new sewer connections to unsewered communities to prevent failing or flooded septic systems from contaminating groundwater and waterways as well sewer connections for environmentally sound and affordable community and economic development and resiliency. Please see attached BCA Zip file with supporting data, maps, and NOAA data. See- BRIC PowerPoint Nature based solutions: Bioretention areas; Permeable roads and infrastructure where possible; Application field will protect trees from being harvested thus protecting the natural environment, creating wind barriers for the surrounding communities and protect groundwater and waterways. Community Lifelines to be aided are: -Security and Safety- the project will protect the safety of communities by reducing the risk of a lagoon failure during a catastrophic event. This will prevent nearby neighborhoods, waterways, and water treatment facilities from being flooded by raw sewage. - Food and Water- the project will protect ground and drinking water and for communities across Pamlico County. It protects the use of, and access to environmentally sound seafood and agricultural products. -Health and Medical – the project will protect the health and well-being of people, their environment, and animals by preventing disease and its spread from exposure to raw sewage. It will also help to protect emergency access to the areas surrounding the lagoon and prevent bio blooms and toxins that might affect the health of residents, waterways, and wildlife. -Energy- preventing lagoon failure will enable post storm access by utilities to the areas surrounding the lagoon. -Communications and transportation- preventing lagoon failure and expanding sewer capacity will help to prevent raw sewage flooding roads and communications infrastructure. This will protect emergency response to the area.

Please identify the entity that will perform any long-term maintenance and provide a 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?

Bay River Metropolitan Sewer District will carry out the long-term maintenance and is responsible for its cost. See attached maintenance schedule.

Additional comments (optional)

This project is compatible with our CAMA land use plan, building codes, and local land use ordinances. Preliminary wetlands and soils surveys have been conducted by the current owner of the additional property to be purchased. If the BRIC grant is awarded, Bay River Metropolitan Sewer District will have its engineers do a complete engineering plan and further assessment. If the project is funded, vulnerable populations will be impacted in a positive way due to health, environmental and socio economic benefits. If the project is not funded it will have a negative impact on vulnerable populations due to the contamination of flood waters contributing to health, environmental, and economic damages. During server weather events, it would provide additional heath and environmental risks to first responders such as fire, rescue squad, water rescues, sheriff's department, and Coast Guard. The outreach strategy for this project includes stakeholder engagement. They will be notified via these methods • Towns- data and notices of public hearing and feedback • Citizens- engagement, feedback, concerns, recommendations, suggestions • Pamlico County- public notices, host public meetings, technical, administrative, and financial assistance • Newspapers -notices of public hearing • Social Media- notices of public hearing and comments • Small Business Center- - notices of public hearing and comments • Chamber of Commerce- input, notices of public hearing and comments

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Oriental Wastewater Lagoon Coordinates and Impact.docx	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Geographic Oriental Wastewater Lagoon coordinates	

Filename	Date uploaded	Uploaded by	Label	Description	Action
BRMSD Maintenance Schedule.xlsx	11/16/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Maintenance Schedule Spreadsheet	
Exhibit-F-Asset-Management-Plan-58298-81595.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	BRMSD asset management plan.	
Photos damages and flooding.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Pictures of part of damage and nearby flooding.	
SB Boundary Survey for Stephen and Helen Benjamin.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Survey of full Hood Tract. Bay River MSD will only Purchase 165 acres of high sandy land.	
BRMSD Lagoon Failure and Septic Impacts.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Potential Catastrophic Failure and Failing Septic Systems Impact Zone	
Engineers Report Analysis.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Engineers report and analysis of Oriental Lagoon needs. Phase 1	
Phase-I-Permit Oriental-Lagoon-Engineering---Permit-58272-66632.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Permit for Oriental Lagoon	
Oriental Lagoon Cross Sections.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Engineering phase 1	
Oriental Lagoon drawings.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Engineered drawings Phase 1	
Oriental Lagoon Structures Schematics.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Structure Schematics Oriental Lagoon Phase 1	
Hood Tract Woodland Management Plan.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Phase 2 Land to be acquired and details of tract. The 165 acres to be purchased is on the northern end of this property, is on the highest grown and on good soil.	
SB Hood Tract GIS.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	GIS of Hood Tract.	
Building Code Effectiveness Grading Classification 5.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	BCEGC documentation	
Exhibit-A-Project-Map-58296-71988.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Engineering project maps for Oriental Lagoon Phase 1	
Hood-Holton Tract 2020ArcMapWOldLandings (1).pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Map of Hood/Holton expansion area	
National Climate Assessment 4_2018_FullReport.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Future conditions	
Lifelines.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Lifelines	
BRMSD Permits #WQCS00264 WQ0013348 (002).pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Current permits	
NOAA Regional Sea Level Rise 2022.docx	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Depicts NOAA regional sea level rise- minus cone of depression on Inner Banks	
NC DOT Counties Map CntyBnd_Legal.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Designates Boundaries of counties in the geographic area of impact and shows some of the water bodies.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
Environmental Justice Factors NC DOT Map.png	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	NC DOT Environmental Justice poverty and minority statistics.	
Oriental Wastewater Lagoon Coordinates and Impact.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Geographic location of the Oriental Wastewater Lagoon	
DSS Data for Justice 40 backup 10-22 Board Numbers.xlsx	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Department of Social Service Numbers depicting number of houses receiving assistance.	
HUD HOME_IncomeLmts_State_NC_2022.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Shows low income limits for Pamlico, Jones, Craven Counties.	
CensusNC Opportunity Zone Low Income Areas.docx	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Proof of Bay River MSD Census designated Opportunity Zone populations and incomes...	
Craven County Population.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Craven County Population demographic from NC Access	
Beaufort County Population Demographics.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Beaufort County population demographics	
Carteret County Population Demographics.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Carteret County Population demographic from NC Access	
4Map of BRMSD Impact to State and East Coast GoogleEarth_Image.jpg	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	View of Oriental Lagoon failure impact to NC and the East Coast of the USA	
Hyde County Demographics.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Hyde County Population demographic from NC Access	
Pamlico County Population Demographics.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Pamlico County Population demographic from NC Access	
Pamlico County Flood Damage Prevention Ordinance.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Flood Damage Ordinance	
public-comment-brmsd.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Outreach Support - Public Comments	
Exhibit-D-Watershed-Classification-58297-37037.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Watershed classification for Phase 1 and 2	
BCA Budget 2022 BRIC- Stroud-David Tuten.zip	01/06/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Contains supporting engineering documentation of damages, flood zone, past issues, NOAA maps, other maps, and budget details.	
BRMSD 2023 BRIC PPoint.pptx	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Power Point with Technical and other details.	
2 Reelsboro Mitigation and Expansion Site Location.jpg_.jpg	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Location of spray mitigation and capacity expansion.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
PC Flood Map.pdf	01/05/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Map of flood zone in Pamlico County	
BRIC2022 Implementation Measures.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Implementation templet	
Project Schedule_Pamlico 2022 BRIC Grant.xlsx	01/23/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Project Schedule	
BRIC2022-Template-Risk Reduction Resilience Effectiveness.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Risk reduction Templet	
BRIC2022-Population Impacted.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Population Impacted Templet	
BRIC2022-Template-Outreach Activities.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Outreach Templet	
Updated20Soils20Hydrogeological20092815.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Hood Tract expansion site soil hydrology	
Weyerhaeuser Track SoilsEvaluation.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Adjacent repair site in Reelsboro soils evaluation	
BRMSD COMMITMENT LETTER 01062023.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Bay River MSD and Pamlico County letter of Commitment	
BRMSD 2022 BRIC PPoint.pptx	01/06/2023	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Powerpoint with lifelines, damages, and nature based solutions	
BRMSD Technical Scoring Support Letter.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Scope of Work Attachments	Technical Scoring Support 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 State Grant Contracting	Start Month 1	Task Duration (in Months) 2 months	Task Description 2 weeks
Task Name Finalizing engineering & procurement (Go-No Go Milestone)	Start Month 3	Task Duration (in Months) 6 months	Task Description Review grant details and add supporting information and clarify details.
Task Name Repair and upgrade Oriental Lagoon	Start Month 10	Task Duration (in Months) 12 months	Task Description Phase 1 will be the repair of existing dykes, placement of fill to increase lagoon depth, installation of surface aerators and floating baffle curtains to convert the existing facultative lagoon system to a partial mix aerated lagoon to prevent a lagoon failure, and to restore the treatment capacity from 200,000 gpd to 400,000 gpd.
Task Name	Start Month 10	Task Duration (in Months) 3 months	

Finalize purchase of Hood Tract from Stephen Benjamin and purchase easements.	Task Description Create contract and agreement, sign, land transfer. This may take time as Mr. Benjamin frequently travels out of the nation on business.
---	---

Task Name Widening easement area & site preparation on Hood Tract and previously purchased Weyerhaeuser tract	Start Month 3	Task Duration (in Months) 12 months
Task Description Widening easement area & site preparation on Hood Tract and previously purchased Weyerhaeuser tract.		

Task Name Order equipment for expansion	Start Month 4	Task Duration (in Months) 12 months
Task Description Order equipment for new site and lines. Due to supply chain issues this may take longer than expected.		

Task Name Build Site Infrastructure at mitigation and expansion site	Start Month 8	Task Duration (in Months) 24 months
Task Description Build Site Infrastructure at mitigation and expansion site. This is part of phase 2 and located in Reelsboro off of Lee Landing Rd.		

Estimate the total duration of your proposed activities (in months). **36**

Proposed project start and end dates

Start Date **2025-01-31**
End Date **2028-08-08**

Introduction

Project location

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

Bay River Metropolitan Sewer District is located on the Central East Coast of the United States on the Inner Banks of North Carolina. It is 2 hours east of Raleigh and 30 miles west of Ocracoke Island. Part 1 - the Oriental Lagoon repairs project lies just northeast of the Town of Oriental, West of the community of Dolphin Point and south of the community of River Dunes. It is accessed via Straight Road and White Farm Road. It is located near the Whitaker Creek tributary on its North, just southeast of Pierce Creek and its tributaries, and just north of the head of Smith Creek. These connect to the Neuse River and the nearby Pamlico Sound. See attached Google Earth map. Part 2 - expansion and mitigation site will be located off of Lee Landing Road in the community of Reelsboro. Lee Landing Road is accessed via Hwy 55 East and is on the southern edge of the community of Reelsboro. It is approximately 12 miles east of New Bern. This area is out of a flood zone, on a sand ridge, and the soil is compatible with the expansion project. See attached Reelsboro Mitigation and Expansion Site Google Earth map. See attached Damaged Oriental Lagoon Location Google Map and Reelsboro Mitigation and Expansion Site Map

Latitude **35.000000**

Longitude **-076.000000**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
DSS Data for Justice 40 backup 10-22 Board Numbers.xlsx	01/23/2023	beth.bucksot@pamlicocounty.org	Project Location Attachments	<i>No description given.</i>	
Damaged Oriental Lagoon Location.jpg	11/17/2022	beth.bucksot@pamlicocounty.org	Project Location Attachments	Damaged Lagoon location and reference points. This is to be repaired.	
Project Area Details.jpg	11/17/2022	beth.bucksot@pamlicocounty.org	Project Location Attachments	Project location in. reference to area details	
Photos damages and flooding.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Project Location Attachments	Pictures of damages and local flooding	
Reelsboro Mitigation and Expansion Site Location.jpg	11/17/2022	beth.bucksot@pamlicocounty.org	Project Location Attachments	This is the location of the mitigation and expansion site. this will enable connecting failing septic systems and handle growth in central and western areas of the County that are not in a flood zone.	

Project benefiting area

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

The benefiting area will be Pamlico County and 4 surrounding counties their waterbodies. Many low income & minority communities are in the path of the these hazards due to flooding, wind driven flooding, & other natural events impacting their locations. Communities lack the resources to address the risks, have provided input & will have additional input on the project. See attached Outreach Activities templet. The project will leverage solutions to those hazards for a 5 county coastal region. Most of the communities are located in new Congressional District 3. Hazards will affect much of the coast of North Carolina. If the project is unfunded there will be eventual direct negative impacts to the environmental, health, economic, & social well being to human populations, wildlife, sea life in the Counties of Beaufort, Carteret, Craven, Hyde, & Pamlico. Impacts are expected for the Bay River, Neuse River, Intracoastal Waterway, Pamlico Sound, Outer Banks, National Seashores at Cape Lookout & Cape Hatteras, US Coast Guard Stations Hobucken & Morehead City, numerous waterways, land, estuaries as well as incorporated & unincorporated communities in the 5 Counties. A few of these are New Bern, Fairfield Harbor, Marine Corps Air Station Cherry Point, Down East Carteret, Beaufort, Bridgeton, Minnesott Beach, Bayboro, Alliance, Stonewall Oriental, Janerio, Maribel, Mesic, Vandemere, Reelsboro, Grantsboro, Mesic, Lowland, Hobucken, Arapahoe, Florence, Whortonsville, River Dunes, Janerio, & adjoining areas as well as areas off of Keystown, Prescott, Savannah, Lee Landing, Neuse, Scott Store, Rand Moore's Swamp Roads, Aurora, Washington (NC), Swan Quarter, Belhaven, Bath, other communities & towns along the Neuse River, Bay River, Pamlico Sound, Atlantic Ocean, and Outer Banks areas of Ocracoke, Hatteras, Avon, Duck... Equites to 181,000 people in addition to: Marine species that utilize the estuary areas in the zone and the Atlantic Ocean. 82 Waterways, the Intracoastal Waterway, Cape Lookout National Seashore, Cedar Island National Wildlife Refuge, Cape Hatteras National Seashore... Much of the area served by the Sewer District (BRMSD) is in a Census Designated NC Opportunity Zone with higher than state & national average of vulnerable poverty & minority populations. These areas will benefit from this project. Areas that were not susceptible to flooding/water table rise are now vulnerable & reporting impacts to septic systems in traditionally non flooding areas. NOAA Sea Level Rise Estimates are 3-6 feet for the century. Additionally there is a cone of depression in the region that has contributed to higher ground water levels. These areas contain residents in need of sewer connections. Pamlico County households to receive immediate benefit will be 1,900 (out of 7,600 homes) homes on step tanks plus 500 (out of 7600) homes on a gravity feed equating to 4500 persons. Once the projects are complete, a

minimum of 200-500 homes or 450 – 1000+persons & 50+ businesses can be added to the Bay River Metro Sewer service district. It will also protect service for existing & future business & residential growth. Protecting the waterways from the potential for contamination will impact up to 90% population of Pamlico County and 181,000 people in a 5 county region. See attached NC Department of Transportation (NCDOT) Environmental Justice Map with poverty statistics of 53% for much of the district versus 23% for NC. Most of the district is 66% minority vs State of NC's 32%. The Social Vulnerability Index for Pamlico County is high at a .86 on a scale of 0-1. See attached: -Pamlico County DSS 10-22-22 Board Numbers & SVI index for Justice 40 Backup -Opportunity Zone Census Tract Number -HUD Home Income Limits -NOAA Sea Level Rise Estimates - Outreach Activities Templet

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Craven County Population.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	NC Access Craven County Demographics	
Pamlico County Population Demographics.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	NC Access Pamlico County Demographics	
NOAA Sea Level Rise map.docx	01/23/2023	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	NOAA East Coast of USA Sea Level Rise Estimates	
Opp Zones-Lowincome.PNG	01/23/2023	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	Census Tract Low-income Opportunity Zone	
NOAA Sea Level Rise Estimates for East Coast of USA.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	NOAA Sea Level Rise Estimates	
BRIC2022-Pamlico-SVI.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	Pamlico County Social Vulnerability Index of .86	
3 Map of BRMSD Impact to State and East Coast GoogleEarth Image.jpg	11/17/2022	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	Benefiting area from North Carolina State and East Coast view.	
BRMSD Impact map.jpg	11/17/2022	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	Project benefiting area from 4 county and waterways regional view.	
BRMSD 2023 BRIC PPoint.pptx	11/18/2022	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	Project benefits and area	
BRMSD 2022 BRIC PPoint.pptx	01/06/2023	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	<i>No description given.</i>	
Hyde County Demographics.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	NC Access Hyde County Demographics	
Carteret County Population Demographics.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	NC Access Carteret County Population Demographics	
Beaufort County Population Demographics.pdf	12/19/2022	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	NC Access Beaufort County Population Demographics	
NorthCarolina_COUNTY SVI.csv	01/23/2023	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	Social Vulnerability Index of Counties	
BRIC2022-Template-Outreach Activities.docx	01/23/2023	beth.bucksot@pamlicocounty.org	Location project benefiting area Attachments	Community input and feedback activities.	

Project impact area

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

There will be beneficial impacts to unincorporated communities of Bayboro, Alliance, Stonewall Oriental, Janerio, Maribel, Mesic, Vandemere, Reelsboro, Grantsboro, Mesic, Lowland, Hobucken, Arapahoe, Florence, Whortonsville, River Dunes, Janerio, and adjoining areas as well as areas off of Keystown, Prescott, Savannah, Lee Landing, Neuse, Scott Store Rand Moores Swamp Roads., as well as all communities and towns along the Neuse River, Bay River, Pamlico Sound and numerous waterbodies located in the counties of: Pamlico, - see attached document Craven, -see attached document Beaufort, - see attached document Carteret, see attached document Hyde,-see attached document Outer Banks of North Carolina- Ocracoke, Hatteras, 82 Waterways, the Intracoastal Waterway, Cape Lookout National Seashore, Cedar Island National Wildlife Refuge, Cape Hatteras National Seashore, living shorelines... Specific Details of Project Impact area: The majority of the county and a large section of the region will be impacted by the project due to the scope. A catastrophic lagoon failure in Oriental plus current and future failing septic systems in low wealth areas would affect waterways, drainage areas, estuaries, fishing, mariculture, and recreation for several counties. Protecting existing sewer infrastructure, while adding capacity for unsewered properties and futures housing and business development will touch the lives of those who live within the County as well as those from SE Beaufort County and Hyde County's town of Ocracoke who come to Pamlico County for health care, shopping and educational needs. Nearly 1/3 of Bay River Metropolitan Sewer District is located within an NC Opportunity Zone. The disadvantaged communities of Bayboro, Maribel, Mesic, Vandemere, lie within that zone. Other disadvantaged communities include sections of Florence, Oriental, Janerio, Reelsboro and unincorporated areas scattered across the County of Pamlico. Approximately 42% of Pamlico County is Low-Moderate Income families with 22% reporting income below poverty level. Nearly 70% of the children in the local school systems are eligible for free or reduced lunch. Nearly 1 in 10 persons in the county receive SNAP benefits. Some of the communities fall under the Justice 40 guidelines. The community of Harlowe in Carteret County is also a minority and low wealth community. It falls under Justice 40 guidelines. Approximately 40% of Pamlico County's square mile land area is covered by a FEMA designated Special Flood Hazard Area. This indicates that over 40% of the Census ~13,000+ population is impacted by a flooding event. However, our GIS and planning counts, not including visitors or second homes, indicate that the population is over 16,500. Several communities in Pamlico and surrounding region fall under the Justice 40 guidelines. Additional impacts for communities along waterways in these counties:- please see attached maps and demographic information for each county. Craven County- Havelock, James City, Bridgeton, Fairfield Harbor, Marine Corp Air Station Cherry Point... Population impact estimate of 70,000+ Carteret County- Down East Carteret, Harlowe (minority Justice 40 community), Cedar Island and Cedar Island Wildlife Refuge, Town of Beaufort, Morehead City, Cape Lookout National Seashore, Atlantic, Marshallburg... Population impact estimate of 53,000+ Beaufort County- Bath, Aurora, Spring Creek, Washington, Belhaven, Bayview... Population impact estimate 38,000 Hyde County- Swan Quarter, Ocracoke Island, Middletown, Engelhard, Gull Rock Gameland... Population impact estimate 4,000+ Total regional population impact estimate of: 181,000 Please see attached map for project impact zone in relation to the State of North Carolina and the East Coast as well as map attachment showing the regional impact on communities, waterbodies, National Seashores...

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Hyde County Demographics.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Population Demographics supporting doc for Hyde County	
3 Map of BRMSD Impact to State and East Coast GoogleEarth_Image.jpg	11/16/2022	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Project Impact to NC and East Coast of USA	
InkedGoogleEarth_Image(002).jpg	11/16/2022	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Local communities, waterbodies, National Seashore sites...	

Filename	Date uploaded	Uploaded by	Label	Description	Action
CensusNC Opportunity Zone Low Income Areas.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Map from NC Department of Commerce denoting Census Low-income/disadvantaged populations and tracts and NC Opportunity Zones.	
BRMSD COMMITMENT LETTER 01062023.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Bay River and Pamlico County letter of Commitment	
Craven County Population.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Population Demographics supporting doc for Craven County	
Pamlico County Population Demographics.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Population Demographics supporting doc for Pamlico County	
Carteret County Population Demographics.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Population Demographics supporting doc for Carteret County	
Beaufort County Population Demographics.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Location project impact area Attachments	Population Demographics supporting doc for Beaufort County	

Project site inventory

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

Please describe how the propert(ies) will be selected upon subgrant approval. (Example: Saferoom Lottery Project, Fix the Bricks Project)

Please [download the excel template](#), and then fill out the template with building or infrastructure data.

Enter the location of the property/structure.

List of location(s) (1 location)

Status	Location ID	Address	Inventory type	Structure type	Mitigation action
✓	49393	101 4th St, Bayboro, NC 28515 , Bayboro, Oriental and Reelsboro, NC, Pamlico, 28515	Infrastructure/Utility/other	Wastewater	Floodproofing, Relocation

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: \$10,076,325.00

Budget type: Construction

▶ Cost type: Cost estimate	\$9,596,500.00
▶ Cost type: Management cost	\$479,825.00

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.

<p>Is this an Economically Disadvantaged Rural Community? ⓘ</p> <p>This determines your federal/non-federal share ratio.</p> <p>No</p>	Proposed federal share	75.93	7651325.00
	Proposed non-federal share	24.07	2425000.00
	Federal share total: 100%		
	Non-federal share total: 24.07%		
<p>Please provide justification for exceeding the allowable federal share here.</p> <p>It is actually 75/25. The SRMC is throwing off the percentages.</p>			

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: County of Pamlico	20.62%	\$500,000.00
▶ Funding source: Bay River Metropolitan Sewer District	79.38%	\$1,925,000.00

Please provide any additional comments below (optional).

The County of Pamlico has in good faith provided \$500,000 in funds to the Bay River Metropolitan Sewer District. The check was presented at a County Commissioner meeting on September 19th, 2022. Stephen Benjamin has donated the \$300,000 difference between the market value of the land to be purchased and what Bay River Metropolitan Sewer District will pay. As a subapplicant to NCDPS's GRIC 2022, the County of Pamlico and Bay River MSD will work to carry out projects in ways to

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
County of Pamlico Check to BRMSD 2022-09-19.agenda.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Budget Attachments	County Commissioner agenda showing presentation of a check for \$500,000 to Bay River Metropolitan Sewer District.	
CensusNC Opportunity Zone Low Income Areas.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Budget Attachments	Documentation of Economically Distressed Communities	
BRIC2022-Pamlico-BudgetRev.pdf	01/20/2023	kaine.riggan@ncdps.gov	Budget Attachments	Cost Estimate	

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? (\$) **155000000**

What are the total project cost? (\$) **9700000**

What is the benefit-cost ratio (BCR) for the entire project? **15.97**

Was sea level rise incorporated into the flood elevations in the BCA? **Yes**

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).

See attached PowerPoint with details of benefits and other data. Includes Outreach activities and public meetings; implementation measures; community lifelines; BCA fails to capture the mitigation activity benefits to disadvantaged communities and the environment; reduction of risk to basic infrastructure including towns, MCAS Cherry Point, emergency responders, residents, 4 counties, Pamlico Correctional Institute, Cape Hatteras and Cape Lookout National Seashores, economies. Neither did it allow us to addresses climate change impacts, or other hard to quantify benefits to meet compliance with the Pamlico Sound Regional Hazard Mitigation Plan and with the Federal Flood Risk Management Standard.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Photos damages and flooding.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	History of Damages Photo	
BRIC2022 Implementation Measures.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	Implementation measures outline	
BRIC2022Leveraging Partners.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	Partnerships	
BRIC2022-Population Impacted.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	Population impacted in Pamlico and Surrounding	

Filename	Date uploaded	Uploaded by	Label	Description	Action
				region.	
BRIC2022-Template-Future_Conditions.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	Addressing future conditions	
BRIC2022-Template-Outreach_Activities.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	Outreach	
_Pamlico County_BCA Methodolgy.pdf	01/06/2023	dtuten@stroudengineer.com	Cost Effectiveness Attachments	BCA Methodology	
PamlicoCounty_Version 6.0.0_Build 20230103.pdf	01/06/2023	dtuten@stroudengineer.com	Cost Effectiveness Attachments	BCA (PDF version)	
Pamlico County_ProjectsExport_202361444731.zip	01/06/2023	dtuten@stroudengineer.com	Cost Effectiveness Attachments	BCA Export	
BRMSD 2022 BRIC PPoint.pptx	01/06/2023	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	Project Briefing Powerpoint	
public-comment-brmsd.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	BRMSD public comment meeting documentation	
County of Pamlico Check to BRMSD 2022-09-19_agenda.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Cost Effectiveness Attachments	Public meeting with presentation of funding to BRMSD	

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 years or more in age? **No**

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).
- A minimum of two color photographs showing at least three sides of each structure (Please label the photos accordingly).
- A diagram or USGS 1:24,000 scale quadrangle map displaying the relationship of the property (s) to the project area.

To help FEMA evaluate the impact of the project, please indicate below any other 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 structure and presence of buildings or structures that are listed or eligible for listing on the National Register of Historic Places or within or near a National Register listed or eligible historic district. Sources for this information may include the State Historic Preservation Officer, and/or the Tribal Historic Preservation Officer (SHPO/THPO), your local planning office, historic preservation organization, or historical society.
- Consideration of how the project design will minimize adverse effects on known or potential historic buildings or structures, and any alternatives considered or implemented to avoid or minimize effects on historic buildings or structures. Please address and note associated costs in your project budget.
- For acquisition/demolition projects affecting historic buildings or structures, any data regarding the consideration and feasibility of elevation, relocation, or flood proofing as alternatives to demolition.
- Attached materials or additional comments.

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

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

B. National Historic Preservation Act - Archeological Resources

Does your project involve disturbance of ground? **Not known**

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.)

- A description of the ground disturbance by giving the dimensions (area, volume, depth, etc.) and location.
- The past use of the area to be disturbed, noting the extent of previously disturbed ground.
- A USGS 1:24,000 scale or other site map showing the location and extent of ground disturbance.

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.
- Attached materials or additional comments.

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

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

Engineering details are in process for the expansion site and will greatly depend on the outcome of the BRIC grant. Details are currently unknown. The Oriental Lagoon renovation will be contained to existing structures and systems.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action

C. Endangered Species Act and Fish and Wildlife Coordination Act

1. 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 selecting each check box. (If you have not provided these documents in any other section of the application, please provide the required documents either through attachment and/or comment box below.)

- Information you obtained to identify species in or near the project area. Provide the source and date of the information cited.

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

- Any request for information and associated response from the USFWS, the National Marine Fisheries Service (NMFS) (for affected ocean-going fish), or your State Wildlife Agency, regarding potential listed species present and potential of the project to impact those species.
- Attached materials or additional comments.

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

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

2. Does your project remove or affect vegetation? **No**

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 provide the required documents either through attachment and/or comment box below.)

- Description of the amount (area) and type of vegetation to be removed or 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 any 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)

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

3. Is your project in, near (within 200 feet), or likely to affect any type of waterway or body of water? **No**

If Yes, and project is not within an existing building, 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.)

A USGS 1:24,000 scale quadrangle map showing the project activities in relation to all nearby water bodies (within 200 feet).

Any information about the type of water body nearby including: its dimensions, the proximity of the project activity to the water body, and the expected and possible changes to the water body, if any. Identify all water bodies regardless whether you think there may be an effect.

A photograph or digital image of the site showing both the body of water and the project area.

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

Evidence of any discussions with the US Fish and Wildlife Service (USFWS), and/or your State Wildlife Agency concerning any potential impacts if there is the potential for the project to affect any water body.

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

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? **No**

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

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:

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

By repairing and upgrading the Oriental Lagoon it will mitigate impacts from Hurricane/storm driven flooding. It will reduce the risk to the Bayboro Lagoon overflowing due to a Hurricane/storm event because it will not have to take 200,000gpd that has been being diverted from the damaged Oriental Lagoon. Creating a new site out of the flood plain will allow failing septic systems in flood prone areas to be connected to sewer and protect the environment and health of people, animals, marine life and vegetation.

This project will repair and upgrade the damaged Oriental Lagoon system. The system was given to Bay River Metropolitan Sewer District to manage and to handle the problems that were arising. The lagoon has been impacted by Hurricanes Floyd, Isabelle, Irene, and Florence as well as Dennis 1 & 2. With rising sea level and increasing storm frequency the damaged lagoon is at high risk of a catastrophic failure that would impact a 4 county region and numerous waterways and estuaries. By repairing the lagoon and adding the mitigation sewer expansion site in Reelsboro we are mitigating against the future sea level rise and increased storm activity. This will protect the environment and health of animals, people, marine life and vegetation and allow for healthy growth out of the flood plain. Maintaining the trees as part of the spray field will provide wind protection for the site as well as the community of Reelsboro and provide a sanctuary area for wildlife and vegetation.

2. Does the project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation? **No**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Exhibit-D-Watershed-Classification-58297-37037.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Watershed data and classification	
Exhibit-A-Project-Map-58296-71988.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Maps and Water Quality Plan	
Oriental-Lagoon-Drawing-Cross-Section-58292-72449.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Engineered drawings of Oriental Lagoon Cross Sections	
Oriental-Lagoon-Progress-Drawing-58291-36464.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Project drawings	
Oriental-Lagoon-Drawing-Details-58293-27518.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Detailed engineer drawings	
Phase-I-Oriental-Lagoon-Engineering--Permit-58272-94681.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Oriental Lagoon Engineering permit	
Building Code Effectiveness Grading Classification 5.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	BCEGC letter	
BRMSD Technical Scoring Support Letter.docx	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Technical Scoring support document	
Photos damages and flooding.docx	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Photos of damages and flooding.	
Exhibit-F-Asset-Management-Plan-58298-81595.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	affectToPercentAnnualChanceFloodplain.attachmentIds	Oriental Lagoon asset plan	

F. Coastal Zone Management Act

1. Is the project located in the state's designated coastal zone? **Not known**

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

Phase 1 of the project is near the Neuse River and located near a Shaded X flood zone. Phase 2 is located outside of a flood zone.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Reelsboro Mitigation and Expansion Site Location.jpg	11/18/2022	beth.bucksot@pamlicocounty.org	locatedInCoastalZone.attachmentIds	New site out of a flood zone and with better soils.	
Project Area Details.jpg	11/18/2022	beth.bucksot@pamlicocounty.org	locatedInCoastalZone.attachmentIds	Overview of area plus Oriental Lagoon and new Reelsboro site.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
PC Flood Map with Sewer lines.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	locatedInCoastalZone.attachmentIds	Flood map that includes current sewer lines for BRMSD district.	

G. Farmland Protection Policy Act

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

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 the property associated with the proposed project? **No**

2. Are there any studies, investigations, or enforcement actions related to the property associated with the proposed project? **No**

3. Does any project construction or operation activities involve the use of hazardous or toxic materials? **No**

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 Order 12898, Environmental Justice for Low 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? **No**

J. Other Environmental/Historic Preservation Laws or Issues

1. Are there other environmental/historic preservation requirements associated with this project that you are aware of? **No**

2. Are there controversial issues associated with this project? **No**

3. Have you conducted any public meeting or solicited public input or comments on your specific proposed mitigation project? **Yes**

If Yes, please indicate in the text box below a description of the requirements, issues or public involvement effort.

Bay River Metropolitan Sewer District has had special meetings and allowed for public feedback. No negative comments were received. The County of Pamlico had a public meeting at which the County Commissioners presented Bay River Metropolitan Sewer District with a check for \$500,000. There was a public comment period. No one commented. The Pamlico Sound Regional Hazard Mitigation Committee listed BRMSD sewer needs as a primary threat and allowed for public comment. No comment was offered. Plan was approved 6-15-20.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
County of Pamlico Check to BRMSD 2022-09-19.agenda.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	otherEHPLawsIssues.attachmentIds	County of Pamlico contribution of \$500,000 of ARPA funds to Bay River MSD. Public comment period.	
public-comment-brmsd.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	otherEHPLawsIssues.attachmentIds	Notice of public comment.	

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? **No**

Evaluation

Is the applicant participating in the [Community Rating System \(CRS\)](#)? **Yes**

Select rating. **5**

Is the applicant a [Cooperating Technical Partner \(CTP\)](#)? **Yes**

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 **2015**

Please provide the building code. **2015 International Building Code and 2015 International Residential Code**

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

Select rating. **5**

Describe involvement of partners to enhance the mitigation activity outcome. **Bay River Metropolitan Sewer District will be the lead on project management and implementation and provide required cost share funds by self-funding or other grant sources. Where possible they will seek nature based solutions. The County of Pamlico will be the applicant, has assisted in writing the application, has provided funding of \$500,000 (September 19, 2022) for the project, and is providing technical, permitting, and administrative assistance. NC Division of Water Quality and CAMA- will oversee permitting, regulatory adherence, and provide project oversight The Division of Coastal Management works to protect, conserve and manage North Carolina's coastal resources through an integrated program of planning, permitting, education and research. DCM will ensure that Bay River Metropolitan Sewer District using rules and policies of the N.C. Coastal Resources Commission. The Division of Water Resources is divided into administrative offices and six sections that work together to efficiently and effectively protect the state's surface water and groundwater resources through quality monitoring programs, efficient permitting, responsible management, fair and effective enforcement, and excellence in public service. Bay River MSD and County of Pamlico will ensure that wastewater practices will comply with the Divisions standards to protect ground water and drinking water. Pamlico County Water and Soil – technical assistance, mapping, soil data. Pamlico County Building Inspections- permitting and oversight Towns and communities of Alliance, Arapahoe, Bayboro, Grantsboro, Reelsboro, Olympia, Oriental, Cayton, Dawsons Creek, Kennels Beach, Janerio, Whortonsville, Florence, Maribel, Mesic, Hobucken, Lowland, Vandemere- community input, assessments and collaboration. Pamlico**

County Planning and Economic Development as well as Eastern Carolina Council of Governments- planning, research, technical assistance, data, grants and administrative assistance. Pamlico County Disaster Recovery Coalition and Pamlico County Planning and Economic Development have responded to disaster recovery and resiliency needs that lead to partnering with Dr. Diane Silimparie at Duke University's Global Health Institute to do a study on the impacts to the vulnerability to health and the environment issues due to Hurricane Florence. Data and interviews were collected collected to document the impacts and to make recommendations for follow up. ---*See attached document PCDRC Written Report Duke DRT Team 8-15-22 also known by its full title of the PCDRC Risk and Vulnerability Assessment: Findings and Recommendations- University Global Health Institute | Student Research Training Program

Discuss how anticipated future conditions are addressed by this project.

We have been engaged in planning that takes mitigation in regards to future conditions into perspective. We anticipate greater storm activity and sea level rise of at least 1.75 feet over the next 100 years. We have taken note that marsh encroachment and areas of sinking land mass may speed this up in some sections of Pamlico County and the region, and are taken this into account for this project and planning as well as in considering future impacts and requirements. This is based on local data and on NOAA Sea Level Rise C and the following data sources: NOAA US Global Change Research Program Nature Conservancy NC Emergency Management FEMA Please see attached BCA - it contains NOAA estimates and maps. Several local and state mitigation plans as well as a local flood ordinance are used in our efforts. A great deal of the eastern side of Pamlico County lies within a flood zone and this project seeks to ensure that this is mitigated and that development is encouraged outside of the flood zone. As storm numbers and intensity increase, and sea level continues to rise, Eastern North Carolina and Pamlico County are at the forefront of bearing the brunt of these forces. We have seen an increase in flooding in low lying areas, including the Oriental Lagoon site, and other areas that historically did not flood are now flooding. This has resulted in failing septic systems for unsewered households and businesses. Yet, the area is growing and is an agricultural breadbasket for North Carolina and the United States. Phase 1 and Phase 2 of our project will address the sewage needs that currently exist and prepare us to face present and future growth while addressing sea level rise, increased storm intensity and preventing present and future contamination of storm water that drains off of the land and into waterbodies. This project will strengthen a sewer lagoon and prevent catastrophic failure while enhancing sewer capacity for present and future neighborhood and business needs that can be located outside of the flood zone. Additionally, the new application field will protect trees from being harvested thus protecting the natural environment, creating wind barriers for the surrounding communities and protect groundwater and waterways. Nearby Cherry Point Naval Air Station is expanding. This has resulted in new residents and businesses moving to Pamlico County and additional ones on the way. Addressing present and future sewer needs will enable the County to better serve those families and businesses and contribute to the overall demand on the region while mitigating against future storms and protecting the environment and health of the region.

Additional comments (optional)

Please see attached documents regarding mitigation planning and preparation for future conditions. Also see attached Flood Damage Prevention Ordinance. Sea level rise is addressed from these sources: NOAA Sea Level Rise C at <https://www.climate.gov/maps-data/dataset/sea-level-rise-map-viewer> NOAA US Global Change Research Program Nature Conservancy NC Emergency Management flood mapping. FEMA See attached the engineer's BCA Budget documents with additional maps and NOAA sea level estimates.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
BRIC2022-Template-Future Conditions.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Future conditions templet	
BRIC2022Leveraging Partners.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Leveraging Partners templet	
Updated20Soils20Hydrogeological20092815.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Hood Tract Soils- Reelsboro Lee Landing	

Filename	Date uploaded	Uploaded by	Label	Description	Action
				mitigation site	
Weyerhaeuser Track SoilsEvaluation.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Adjaent to Hood Tract soils- Reelsbro Lee Landin site	
2 Technical Scoring Support .pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	<i>No description given.</i>	
Assurances letter County.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Assurances and Labor Standards	
RebuildNC Pamlico Plan Combined.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Evaluation Attachments	State funded hazard mitigation plan for Pamlico County	
7.9 - Pamlico Regional Hazard Mitigation Plan.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Pamlico as part of regional hazard mitigation plan.	
Pamlico County Flood Damage Prevention Ordinance.pdf	11/18/2022	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Flood Damage prevention	
BCA Budget 2022 BRIC- Stroud-David Tuten.zip	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	BCA	
Grantsboro BRIC Pamlico Co Bay River Letter Support.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Town of Grantsboro support letter	
Town of Mesic BRIC Letter of Partner Support Pam Co Bay River M.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Mesic letter of support	
PC Soil and Water Partner Letter of Support.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Soil and Water letter of support	
2022 BRIC PC Environmental Health Partner Support Letter.docx	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Pamlico County Health Department - Letter of Support	
Vandemere Partner Letter of Support Pamlico County BRIC.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Town of Vandemere letter of support	
NOAA Sea Level Rise map.docx	11/18/2022	beth.bucksot@pamlicocounty.org	Evaluation Attachments	NOAA Sea Level map of NC	
Minnesott Beach BRIC Pamlico Co Support letter 1-3-22.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Support letter Minnesott Beach	
ECCOG Partner Letter of Support - 2022 BRIC Grant 1-4-23.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Support letter Council of Governments	
BRMSD Project Overview Narrative.docx	01/20/2023	kaine.riggan@ncdps.gov	Evaluation Attachments	Project Overview Narrative	
Building Code Effectiveness Grading Classification 5.pdf	01/23/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	BCEGC proof	
Project Schedule Pamlico 2022 BRIC Grant.xlsx	01/23/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Project schedule	
Letter of Support - Pamlico Co. - BRIC Grant Appl. - 23.01.04.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	County of Pamlico Letter of Support	
PCDRC Written Report- Duke DRT team 8-15-22.pdf	01/06/2023	beth.bucksot@pamlicocounty.org	Evaluation Attachments	Duke University report on health impacts	

Comments & attachments

► **Community**

1 comment, 30 attachments

► **Mitigation plan**

1 comment, 12 attachments

▶ Scope of work	1 comment, 49 attachments
▶ Budget	1 comment, 3 attachments
▶ Cost-effectiveness	1 comment, 12 attachments
▶ Evaluation	1 comment, 23 attachments
▶ Environmental/Historic Preservation (EHP)	0 comment, 16 attachments
▶ Location	0 comment, 29 attachments

Assurances and certifications

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

- 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.
- 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.
- 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.
- Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
- 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.
- Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- 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.
- 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).
- 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.
- 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 (P.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.
- 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.
- 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.
- 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 (P.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.