EasyGrantsID: 84439

National Fish and Wildlife Foundation – National Coastal Resilience Fund 2024, Full Proposal

Title: Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)

Organization: City of Hampton

Grant Information

Title of Project

Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)

Total Amount Requested	$ 845,000.00
Matching Contributions Proposed	$142,800.00
Proposed Grant Period	12/01/ 2024 - 12/01/ 2026

Project Description

Develop a holistic series of nature-based solutions (thin-layer placement for marsh enhancement, oyster reefs, and submerged aquatic vegetation beds) in the Back River Estuary to enhance coastal resiliency. Project will protect natural habitats and communities in Hampton/Joint Base Langley Eustis.

Project Abstract

The Back River estuary comprises approximately 58.7 Square Miles and includes portions of the cities of Hampton, Poquoson, Newport News and York County and several federal installations including Plum Tree Island National Wildlife refuge, Joint Base Langley Eustis, and NASA- Langley. It also provides an important stopover area for several migratory bird species and provides nursery and forage habitat for many recreationally and commercially important aquatic species. The Tidewater Region is highly vulnerable to coastal flooding, storm surge, and sea level rise, and is already experiencing nuisance flooding and coastal habitat loss. This project proposed to increase the coastal resilience of Back River habitats and communities through the development of a suite of nature-based solution projects such as thin-layer placement for marsh enhancement, oyster reefs, submerged aquatic vegetation bed restoration, and ephemeral islands. These projects will increase marsh resilience to wave action and sea level rise, reduce flood risk in Back River communities, and improve habitat quality and extent in the estuary. The City of Hampton has an established history of implementing equitable engagement through the resilience planning process ensuring community members voices to be heard and influence decisions and project outcomes.

Organization and Primary Contact Information

Organization	City of Hampton
Organization Type	State or Local Government
City, State, Country	Hampton,Virginia,North America - United States
Region (if international)	
Primary Contact	Mr. Scott A. Smith
Position/Title	Senior Civil Engineer
Phone and E-mail	757-727-6781 x ; scott.smith@hampton.gov

Additional Contacts

Role	Name

Other Authorized Personnel	Olivia Askew

Project Location Information

Project Location Description	Back River Estuary, Hampton, Virginia
Project Country(ies)	North America - United States
Project State(s)	Virginia
Project Congressional District(s)	District 3 (VA)

Permits and Approvals

Permits/Approvals Description:

Permits/Approvals Status:

Permits/Approvals Agency-Contact Person:

Permits/Approvals Submittal-Approval Date:

Activities and Outcomes

Funding Strategy: Capacity, Outreach, Incentives
Metric: Resilience - Outreach/ Education/ Technical Assistance - # govt entities participating
Required: Recommended
Description: Enter the number of municipalities, local, state, and federal government entities participating in the project, and add the names of these institutions in the notes and their primary role.

Starting Value	2.00 # gov't entities participating
Target value	6.00 # gov't entities participating

Note: City of Hampton and JBLE are partners. Project will engage with several governmental stakeholders (VMRC, USACE, HRPDC, USFWS, DWR, NASA, Poquoson, and others).

Funding Strategy: Capacity, Outreach, Incentives
Metric: Resilience - Outreach/ Education/ Technical Assistance - # people reached
Required: Recommended
Description: Enter the number of people meaningfully engaged in the process of the proposed project. Please indicate the groups targeted by outreach efforts and how they will be engaged.

Starting Value	0.00 # people reached
Target value	150.00 # people reached

Note: Project includes extensive community outreach and workshops with community members and regional stakeholder organizations – Fox Hill Neighborhood Center Board, Grandview Island Trust, Grandview Island Beach Partners, Hampton City Schools Environmental Science Academy, and local watermen.

Funding Strategy: Planning, Research, Monitoring
Metric: Resilience - Restoration planning/design/permitting - # E&D plans developed
Required: Recommended
Description: Enter the number of Engineering and Design plans developed. Generally there will be one plan per project to be constructed.

Starting Value	0.00 # E&D plans developed
Target value	4.00 # E&D plans developed

Note: The project outcomes include the development of four 30% NBS designs for the Back River Estuary.

Funding Strategy: Planning, Research, Monitoring
Metric: Resilience - Tool development for decision-making - # tools used by decision-makers
Required: Recommended
Description: Enter number of tools developed to be used by decision-makers

Starting Value	0.00 # tools used by decision-makers
Target value	1.00 # tools used by decision-makers

Note: The project outcomes include the use of a multi-criteria decision analysis (MCDA) used as a tool with community members and stakeholders to identify project priorities and sites.

I. PERSONNEL $42,800.00

Staff Name	Position	Annual Salary	Project Hours	Hourly Rate	LOE (%)	Project Salary	% Fringe	$ Fringe	Total Personnel
Scott Smith	Coastal Engineer	$125,018.90	328.00	$60.11	16	$19,714.52	10.00	$1,971.45	$21,685.97
Olivia Askew	Resilience Specialist	$65,520.00	281.00	$31.5	14	$8,851.50	10.00	$885.15	$9,736.65
Nicole Hutton	Resilience Officer	$54,000.00	180.00	$25.96	9	$4,673.08	10.00	$467.31	$5,140.38
Anna Hammond	Resiliency Specialist	$65,520.00	180.00	$31.5	9	$5,670.00	10.00	$567.00	$6,237.00
Totals						**$38,909.10**		**$3,890.91**	**$42,800.00**

II. TRAVEL $0.00

Domestic Airfare – Per Flight

Purpose/Destination	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

International Airfare – Per Flight

Purpose/Destination	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

Train – Per Ticket

Purpose/Destination	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

Rental Car – Per Day

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

Taxis – Per Trip

Purpose/Destination	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

Mileage – Per Mile

Purpose/Destination	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

Gasoline – Per Gallon

Purpose/Destination	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

Per Diem (M&IE) – Per Day

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

Lodging – Per Night

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

Meals (no M&IE) – Per Meal

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost

SubTotal **$0.00**

III. EQUIPMENT **$0.00**

Item Name	Description	Unit Cost	Quantity	Total Cost

IV. MATERIALS & SUPPLIES **$0.00**

Type	Purpose	Unit of Measure	Unit Cost	Quantity	Total Cost

V. CONTRACTUAL SERVICES **$802,200.00**

Subcontract/Contract – Per Agreement

Contractor Name	Description	Total Cost
EA	Environmental and Scientific services	$802,200.00

SubTotal **$802,200.00**

Subgrant – Per Agreement

Subrecipient	Description	Total Cost

SubTotal **$0.00**

VI. OTHER DIRECT COSTS **$0.00**

Type	Purpose	Unit of Measure	Unit Cost	Quantity	Total Cost

VII. TOTAL DIRECT COSTS **$845,000.00**

VIII. INDIRECT COSTS **$0.00**

Explanation of Modified Total Direct Cost Base(MTDC)	Rate Type	NICRA Expiration	$MTDC	Rate(%)	Total Cost

IX. TOTAL PROJECT COSTS **$845,000.00**

Budget Narrative

Budget Narrative:

1. Personnel

Personnel -	City Staff that will participate in regular meetings, manage the grant and provide reporting and requests for reimbursement, rparticipate in community engagement.

2. Travel

Domestic Airfare - Per Flight -
International Airfare - Per Flight -
Train - Per Ticket -
Rental Car - Per Day -
Taxis - Per Trip -
Mileage - Per Mile -
Gasoline - Per Gallon -
Per Diem (M&IE) - Per Day -
Lodging - Per Night -
Meals (No M&IE) - Per Meal -

3. Equipment

Equipment -

4. Materials and Supplies

Materials and Supplies -

5. Contractual Services

Subcontract/Contract - Per Agreement -	The engineering and environmental consultant(s) will assist the City of Hampton with execution of the project. Subcontractor tasks include leading and executing technical elements of the effort such as field data collection analysis efforts, modeling, engineering design, dredge analysis, incorporation of sea level rise and climate change data into the design process, ecological assessments, pre-application regulatory meetings. The subcontractor will also support the City of Hampton in engagement and outreach activities and workshops.
Subgrant - Per Agreement -	

6. Other Direct Costs

Other Direct Costs -

7. Indirect Costs

Indirect Costs -

Matching Contributions

Matching Contribution Amount:	$100,000.00
Type:	In-kind
Status:	Received
Source:	VA DCR Community Flood Preparedness Fund
Source Type:	Non-Federal
Description:	The City was awarded $360,000 to conduct a Water Plan for the Fox Hill, Grandview and Harris Creek neighborhoods. The plan will have a robust engagement process that will assist this project. The City will leverage $100,000 toward engagement.

Matching Contribution Amount:	$42,800.00
Type:	In-kind
Status:	Pledged
Source:	City of Hampton
Source Type:	Non-Federal
Description:	City of Hampton Resilience Division staff are committing over 800 hours towards project implementation - resulting in a $42,800 in-kind match.

Total Amount of Matching Contributions:	$142,800.00

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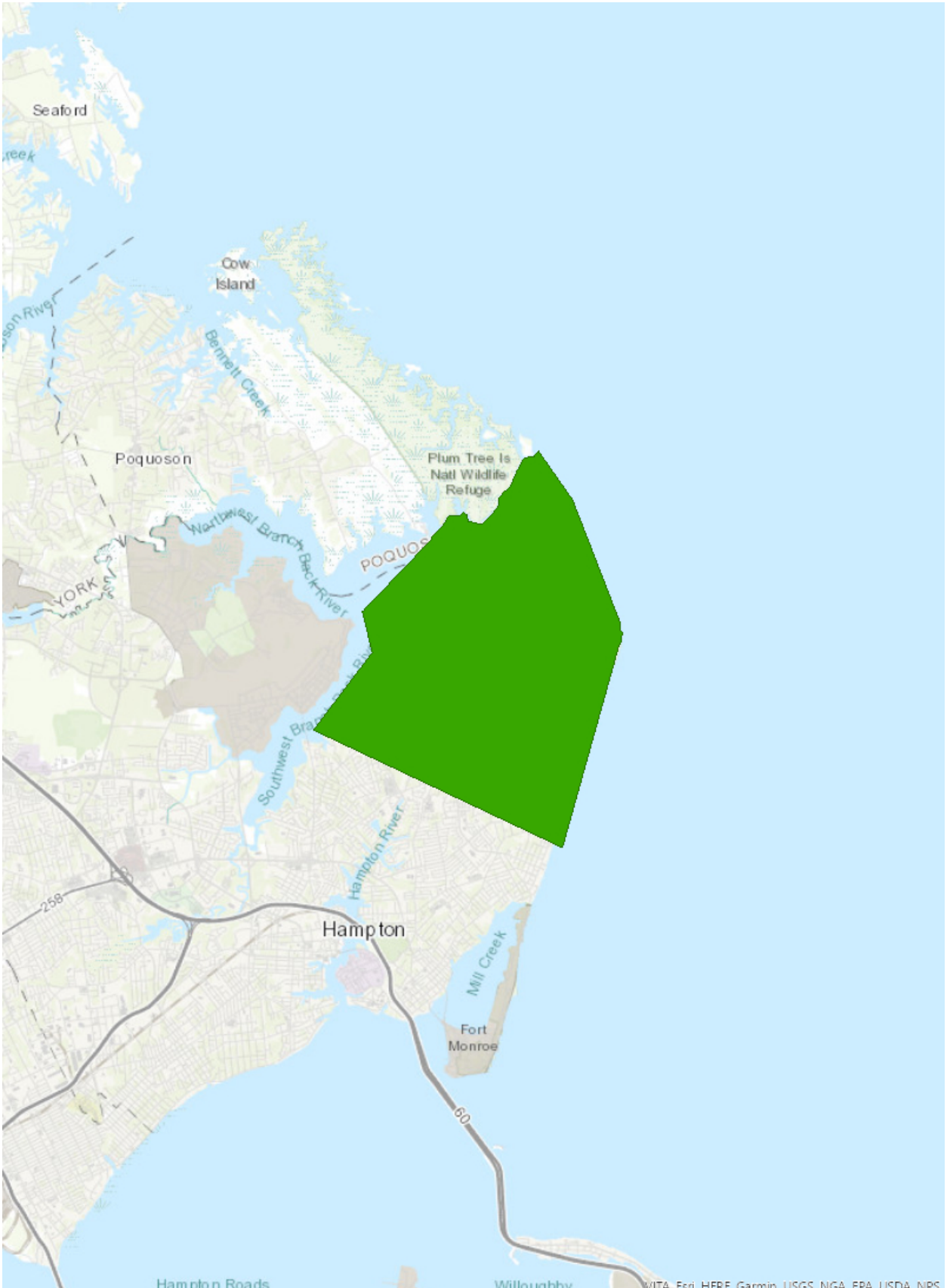


The following pages contain the uploaded documents, in the order shown below, as provided by the applicant:

Upload Type	File Name	Uploaded By	Uploaded Date
NCRF Pre and Full Proposal Narrative 2024	2024+NCRF+Pre+Full+Proposal+Narrative+Template.docx	Smith, Scott	07/02/2024
Project Map	Project Location.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_JamersRiverAssociation.pdf	Smith, Scott	07/01/2024
Letters of Support	Grandview Letter of Rec._VMRC.pdf	Smith, Scott	07/02/2024
Letters of Support	2024-07-02 HRPDC Letter of Support for Hampton NCRF Proposal.pdf	Smith, Scott	07/02/2024
Letters of Support	CityofHamptonNCRF_LOS_ChesapeakeBayFoundation.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_DeptWildlifeResources.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_ElizabethRiverProject.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_FoxHillNeighborhoodCenter.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_GrandviewBeachPartners.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_GrandviewTrust.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_JBLE-Langley.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_NASA-LaRC.pdf	Smith, Scott	07/01/2024
Letters of Support	CityofHamptonNCRF_LOS_TidewaterSentinelLandscape.pdf	Smith, Scott	07/01/2024
Photos - Jpeg	Photo1_LongCreekErosion.jpeg	Smith, Scott	07/01/2024
Photos - Jpeg	Photo2_AerialGrandviewMarsh.jpg	Smith, Scott	07/01/2024

Photos - Jpeg	Photo3_AerialLongCreek.jpg	Smith, Scott	07/01/2024
NCRF Monitoring Metrics and Protocols 2024	NCRF_FullProposalDocs_Metrics.docx	Smith, Scott	07/02/2024
Statement of Litigation	Statement+of+Litigation.docx	Smith, Scott	07/01/2024
Board of Trustees, Directors, or equivalent	Board of Directors.pdf	Smith, Scott	07/01/2024
Applicant Controls Questionnaire (Pre 3.25.24)	NCRF Applicants Control Document 07.02.2024.pdf	Smith, Scott	07/02/2024
NCRF Full Proposal Special Upload 2024	2024+NCRF+Full+Proposal+Special+Upload.docx	Smith, Scott	07/02/2024

The following uploads do not have the same headers and footers as the previous sections of this document in order to preserve the integrity of the actual files uploaded.

NCRF *PROPOSAL* – Narrative Template

PART I – PROJECT OVERVIEW

Project Category: Site(s) Assessment and Preliminary Design

1. The Tidewater region of Southeastern Virginia is experiencing the highest rate of sea level rise (SLR) along the East Coast. The number of residents exposed to major coastal flooding is projected to increase by 160% and 89% of tidal wetlands are projected to be lost to inundation by 2080. This will result in socioeconomic concerns and exacerbated shoreline erosion and habitat loss. These vulnerabilities threaten the Back River Estuary and watershed (project area), which includes the Cities of Hampton and Poquoson, NASA Langley Research Center (NASA-LARC), and Joint Base Langley-Eustis (JBLE). Marshes mitigate storm impact by substantially reducing wave-generating fetch length from the mouth of the bay along the Back River. The marshes of Grandview Nature Preserve and Plum Tree Island National Wildlife Refuge (NWR) constitute the largest contiguous saltmarsh in the lower Chesapeake Bay. These marshes mitigate storm impact by substantially reducing wave-generating fetch length from the mouth of the bay along the Back River. They are critical stopover points for migratory birds along the Atlantic Coast Flyway and provide breeding habitat for threatened and endangered bird species, host the threatened Beach Tiger Beetle, and are rated as high-value ecological cores by the Virginia Department of Conservation and Recreation. Without proactive intervention, these marshes are expected to disappear within 80 years.

2. This project will integrate and build upon several major resiliency reports, projects, and partnerships; those specific to JBLE lands are provided in the Special Upload. Past resilience activities include (1) The 2018 Living With Water Hampton citywide resilience plan; (2) The 2018 Hampton-Langley Joint Land Use Study (JLUS) Resiliency Addendum; (3) Nature-Based Solutions (NBS) plans and site assessments developed in 2022 and 2023 workshops through the USACE Engineering with Nature (EWN) program. Future resilience activities include the (1) USACE Virginia Peninsula Coastal Storm Risk Management Feasibility Study, (2) Grandview Island neighborhood resilience plan, and (3) development of the Beneficial Use of Sediment and Thin-Layer Placement (TLP) Guidance documents for Virginia (Virginia Marine Resources Commission [VMRC] and Elizabeth River Project (ERP]).

3. N/A **4.** N/A

5. Using a holistic approach, this project will investigate a suite of NBS in the project area (approximately 14-square miles of the Back River Estuary) to address coastal hazards, improve resilience, and offer other community benefits. To assess which NBS would provide maximum benefit, a comprehensive site assessment will be completed to expand on existing data. This effort will include field data collection and a vulnerability analysis. These assessments will lead to the development of four NBS designs (30% designs) that will be further refined through community input. The initial concepts may include (1) TLP of dredged sediment to nourish the marsh and combat SLR impacts and achieve target elevations determined by site surveys; (2) living oyster breakwater structures to combat shoreline erosion, reduce wave energy, improve water quality, and provide habitat; (3) expanding existing submerged aquatic vegetation (SAV) beds to foster further biomass, stabilize sediment, improve water quality, and provide habitat; and (4) potential exploration of sand motors/development of ephemeral islands to promote passive nourishment, support marsh edge sediment accumulation and local beach sediment supply. These features will improve biodiversity, support SLR adaptation, mitigate community storm impacts, and offer a host of other co-benefits.

6. The risk of SLR, nuisance flooding, and coastal storm surges is high in the watershed, and its impacts are felt by state and federal agencies, residents, and visitors; this level of risk necessitates solutions at scale. By taking a large-scale holistic approach in the Back River Estuary that explores and incorporates multiple NBS,

this project will help ensure improved regional climate resiliency and provide a regional example for landscape-scale NBS implementation. This approach is applicable and scalable for large and smaller-scale implementation efforts throughout the Back River Estuary, the Chesapeake Region, and in similar landscapes nationwide. In addition, having four designs that can be implemented in phases will inform efforts to build landscape-scale projects in phases that are realistic to funding, regulatory, and workload constraints.

7. The project team (City of Hampton and JBLE) will be advancing initial concepts developed as part of a partnership between JBLE and the City of Hampton. These designs will be advanced through completion of a revised data gaps analysis and site assessment for Back River Estuary that includes field data collection, a vulnerability assessment, and the development of 30% designs for four NBS designs. This phase will also include extensive stakeholder and community outreach to obtain meaningful input on the initial concepts and 30% designs and will set the stage for local buy-in during future phases. The requested funding for these steps cost will be $845,000 and will span 24-months from 2024 to 2026.
8. Developing several integrated NBS allows for a multi-faceted approach that addresses site-specific and regional issues with flooding and other coastal hazards. Deploying multiple NBS also provides a testbed to help move forward their widespread implementation in the Back River and region. These NBS will also provide more immediate benefits by reducing the effects of climate change and storm surge and help maintain habitat for various listed and commercially and recreationally important species.

9. These projects will provide localized coastal resilience and habitat benefits at implementation sites, but more importantly will benefit the resiliency of larger marsh complexes within the Back River Estuary. Healthier, more resilient marshes will better protect Hampton, Poquoson, NASA and JBLE's facilities and mission activities, and other up-river stakeholders. This approach has a high degree of transferability to coastal communities and will serve as both a regional template and a national model for the expansion of NBS coastal applications to promote coastal resilience and provide sustainable benefits to fish and wildlife.

10. The project team and stakeholders will be working closely together on this project. Stakeholders include federal agencies (U.S. Fish and Wildlife Service [USFWS], NASA-LARC, USACE Norfolk District, USACE EWN, and the DoD Chesapeake Bay Program); state and regional stakeholders (VMRC, Hampton Roads Planning District Commission, Chesapeake Bay Foundation, and the Elizabeth River Project). Academic stakeholders include Hampton City Schools, Hampton University, the Virginia Institute of Marine Science, the University of Delaware, and the University of Florida, many of whom are engaged in active work in the Back River Estuary. In addition, this project will include coordination and extensive engagement with impacted community groups, including Grandview Island Partners, Grandview Trust, Fox Hill Neighborhood Center Board, Fox Hill Athletic Association, and Back River Lighthouse Keepers' Society.
11. The watershed includes 5 census tracts determined to be socially vulnerable that represent approximately 14% of the watershed's population; this project will benefit approximately 21,000 people in marginalized, underserved, and underrepresented communities.

Community	Race/Ethnicity	Poverty Rate	Low Income %	Annualized Unemployment Rate
City of Hampton	White: 38.7% Black or African American: 49% Asian: 2.1% Hispanic or Latino: 6.6% American Indian & Alaska Native alone: 0.3% White alone, not Hispanic or Latino: 36.4% Native Hawaiian & Other Pacific Islander: 0.1% Two or more races: 7.9%	13.5%	**37.6%**	**3.9%**

12. The proposed NBS will reduce storm surge vulnerability, improve wave protection/attenuation, water quality, and create/protect habitat. These measures will help the Hampton community mitigate flooding and storm surge impacts and protect infrastructure, while increasing the longevity of the ecologically thriving

Grandview Nature Preserve. Increasing SAV coverage, marsh extent, and oyster reefs will benefit habitat and improve conditions for subsistence, recreational, and commercial fishing and shellfish harvest.

13. The Back River marsh complex is an important stopover for migratory birds along the Atlantic Coast Flyway, including 28 Birds of Conservation Concern. Factory Point Beach hosts the largest least tern colony on the Atlantic Coast, supports black skimmers, American oystercatchers, and other shorebirds, as well as the state-protected diamondback terrapin and federally threatened northeastern beach tiger beetle. Federally threatened piping plovers and red knot have been observed at Grandview Nature Preserve. Restoration of oyster reefs and SAV beds will benefit fish, shellfish, and turtle species. These projects will increase available habitat and provide forage, nesting, resting, and nursery grounds.

14. The City of Hampton will leverage insights from the future $600,000 Fox Hill, Grandview, and Harris Creek neighborhood resilience plan development, that will begin in Winter 2024, which will include robust community engagement within the watershed. Hampton has an established history of implementing equitable engagement through the resilience planning process ensuring community voices influence decisions and maximize local ownership of project outcomes.

15. Other Uploads: Please see the DOD special upload narrative template.

16. Other NFWF Applications: N/A.

PART II – SCOPE OF WORK

A. Methods and Activities:

This project will use a holistic approach that includes a site assessment, vulnerability analysis, and community engagement to develop a suite of NBS designs for the Back River Estuary. These designs are intended to address coastal hazards, improve resilience, and deliver multiple community benefits. The anticipated designs will likely include (1) TLP of dredged sediment; (2) living oyster breakwater structures; (3) expanding existing SAV beds through planting or seeding; and (4) potential exploration of sand motors/development of ephemeral islands. The activities and deliverables outlined are intended to identify areas that are vulnerable to the impacts of climate change and will provide sufficient data to design responsive NBS suited for the landscape and surrounding Back River Estuary communities.

This approach is intended serve as a template/process that can be shared with other communities seeking to develop NBS for coastal resilience and habitat benefits. To ensure scalability and transferability, several of the tasks have been developed to include documentation of the process and efforts undertaken, lessons learned, and future recommendations.

1. Field Data Collection and Site Assessment (27% of Budget)

a. Desktop Analysis of Existing Data. Building off the previously developed site assessments under the EWN Program for JBLE, the initial phase of this project will complete a desktop analysis of existing data, including natural resources, physical conditions, and cultural resources. The team has a thorough understanding of the existing conditions in the region from the past EWN/JBLE efforts, but this analysis will be expanded to include new data and will be focused on the estuary.

b. Field Data Collection Activities. The data gaps identified during the desktop analysis will inform the field data collection. Anticipated key data that will be collected includes elevation and ecological data for critical areas; hydrodynamic data, including development of a site-specific tidal datum and wave climate; sediment geotechnical analysis; and water quality data.

i. *Elevation data* will be collected using survey-grade equipment to confirm the accuracy of existing elevation data sources and to provide precise elevations of key features, including elevations of existing habitat types (i.e. high marsh and how it relates to the site-specific

tidal datum). This effort will include the establishment of transects in key areas (nearshore zone to upland areas). Elevation data will be captured along transects to cover the beach, marsh zones, dunes, and other features.

ii. The *ecological assessment* will include vegetation plots on the established transects to capture vegetation changes along the shoreline gradient and marshes. The field team will document the elevation, habitat type, and vegetation species in each plot. Other ecological data collection anticipated includes vegetation changes, incidental observations/extent of invasive plants, characterization of wildlife habitat features along the transects, such as nests and/or feeding areas, and documentation of incidental wildlife observations.

iii. *Hydrodynamic data collection* will focus on developing a site-specific tidal datum, documenting the magnitude and frequency of storm surge within the estuary, and collection of site-specific wave data. This effort will employ both instruments that are already deployed in the estuary and the deployment additional instrumentation in critical locations. Data will be correlated to nearby tidal gauges to understand long-term hydrodynamic conditions at key locations. Site-specific data are critical for developing the Vulnerability Analysis (Task 2a) and for modeling efforts during NBS design (Task 5).

iv. *Marsh sediment samples* will be collected from locations identified as having high potential for TLP. These samples will be evaluated for geotechnical properties to inform TLP design. This will include an estimate of marsh bearing capacity to understand the potential consolidation of the marsh that will occur after TLP implementation.

v. *Water quality data* will be collected and evaluated in areas where SAV and oyster reefs have been previously documented and at locations identified as suitable for SAV or oyster reefs restoration and creation. These data will inform the viability of establishing these habitats to provide additional resilience benefits.

c. Site Assessment Report. Following the desktop data analysis and field data collection, the team will develop a comprehensive site assessment report that summarizes the existing and anticipated future conditions of the estuary. These data and the report will supplement additional past work and build the foundation upon which NBS designs can be based.

Deliverables. Deliverables under Task 1 will include the following: 1) A Field Study Plan to guide the field data collection, including a health/safety plan; 2) A Site Assessment Report to provide a concise but comprehensive evaluation of the current and future condition of the estuary and surrounding areas. The report will also identify potential focal points for future conceptual design and vulnerability analysis.

2. Vulnerability Analysis (17% of Budget)

a. An SLR/coastal flood analysis will be performed for the project area using available bathymetric data and SLR projections. Tidal datum data from the nearest tidal station and the site-specific tidal datum developed in Task 1 will indicate current mean higher-high water (MHHW). The most current interagency SLR projections will be used to estimate the tidal datum to various points in the future. This analysis will identify areas within the system that are vulnerable to marsh loss and erosion and the results will be used to determine locations where NBS development will be most effective.

b. Flooding and coastal storm inundation are often one of the most significant sources of risk to infrastructure. The vulnerability of critical infrastructure identified during the desktop analysis (Task 1a) will be reviewed. Locations with vulnerabilities will be prioritized for NBS development.

c. The team will identify culturally sensitive areas in the project area that may be vulnerable to climate change and SLR or that may be adversely affected by the implementation of NBS projects. A cultural resources review will be completed as part of the desktop analysis (Task 1a). The team will review existing spatial data with identified cultural resource locations and compare these data with coastal

flooding and SLR impacts. Culturally important or sensitive sites will also be identified through discussions during community outreach and engagement efforts (Task 7).

d. The unvegetated to vegetated marsh ratio (UVVR) can be used as a measurement of marsh health to identify where marshes are converting to open water. The team will assess UVVR data and identify areas with a high vulnerability to SLR that are priorities for NBS design development.
e. The Back River Estuary offers sensitive and high-value aquatic and terrestrial habitats that support fish and wildlife, including threatened and endangered species and migratory birds. The vulnerability of habitats for listed species, rare species, and commercially and recreationally important species will be analyzed. Suitable high value habitat areas may be prioritized for NBS development.

Deliverables. Task 2 deliverables will include: 1) A Vulnerability Analysis Report with figures identifying areas of high vulnerability (critical infrastructure, culturally sensitive areas, and high-value habitat).

3. Alternatives Analysis Report, 10% Conceptual Designs, and 30% Design Selection (12% of Budget)

a. Using the data gathered in Tasks 1 and 2, several 10% conceptual designs for NBS projects will be created. These will be basic concepts of potential NBS in high-priority areas identified in Task 2. The project team will likely consider TLP for marsh nourishment, oyster reefs, SAV bed development, sand motors, ephemeral sand islands, and dune restoration or creation, as well as other concepts.
b. To select the four designs that will be advanced to later stages of design, a multiple-criteria decision analysis (MCDA) will be conducted as part of the alternatives analysis. The MCDA weighs project goals and objectives against each design alternative to rank projects from most preferred (most likely to successfully address project goals and objectives) to least preferred. An MCDA is an interactive process and community support is a critical criterion to be considered. As such, the MCDA will be presented to the stakeholders and community members for review and refinement as part of a Design Charette (Task 7a) to ensure that the priorities of the community and stakeholders are integrated into the decision-making process. An MCDA allows for the project team to consider and weigh competing interests and factor in the knowledge, opinion, and priorities of the community, practitioners, experts, and local leaders. Upon competition, the four highest-ranked alternatives will be selected for 30% design under Task 5.
c. An Alternatives Analysis Report will be developed that presents the 10% conceptual designs, the MCDA, and identifies the four projects that will be moved forward to 30% design. The report will provide an overview of the design options, detailed design considerations, and list data required for future design phases, and outlines the decision-making process. The analysis report will also expand upon construction phasing options for each project concept that will be moved forward.

Deliverables. Deliverables for Task 3 will include the following: 1) 10% Conceptual NBS Design Figures; 2) The MCDA table informed by the design charette with stakeholders and the community; 3) An Alternatives Analysis Report that documents the 10% Conceptual Designs, the MCDA process, and the projects that will advance to 30% design. This report will document the process, so that other projects may use a similar ranking process when assessing NBS development.

4. Sediment Availability and Timing Analysis (3% of Budget)

a. To identify the potential location of dredged sediment for use in the NBS conceptual projects an analysis of both historic dredging work and the timing of planned dredging projects proximate to the project area will be conducted that includes Long Creek, Back River, and Harris Creek. The project team will work with ERP and VMRC to establish a database of dredging and locations suitable for beneficial use of dredged material. This task will include conversations with USACE to understand the schedule for upcoming movement/storage of sediment so that actions and timelines may be

coordinated. The project team assumes that existing sediment data can be used to advance to the 30% design; therefore, testing for potential sources is not included as part of this analysis.

Deliverables. The deliverables for this task include the following: 1) a consolidated list of potentially suitable dredged material sources, dredging equipment considerations, and proposed timelines needed to match upcoming dredging with potential beneficial use projects.

5. 30% Designs and Hydrodynamic Modeling (35% of Budget)

a. The four alternatives selected in Task 3 will be advanced to a 30% design stage. These designs will each be represented by a set of engineering drawings intended to support future detailed design. The alternatives will be advanced and refined through an engineering design process and informed by ongoing community engagement and outreach (Task 7). The 30% designs will be intended to improve resilience against SLR and protect surrounding communities. Each design will include engineering drawings, basis of design memorandum, and engineering opinion of construction cost.

b. A hydrodynamic model will be developed to aid in the 30% design development. This model will rely on data collected in Tasks 1 and 2. The model will use current and project future conditions to determine the optimum sizing for the NBS designs to address current SLR and wave impact as well as to be adaptable to climate change-associated SLR.

Deliverables. Deliverables for this task will include the following: 1) Four 30% Designs, each including a set of engineering drawings, a basis of design memorandum, and construction cost estimates; and 2) a technical memorandum outlining the calculations and results from the hydrodynamic model.

6. Permit Coordination and Consistency with Existing Planning Efforts (2% of Budget)

a. The project team will hold at least two pre-application meetings with regulators and coordinate with regulators ahead of future submittal of a Joint Permit Application to be completed in later phases of the project. The pre-application meetings may include local wetland boards, the VMRC, the Virginia Department of Environmental Quality, and the USACE. The project team will share 30% designs at the meetings to solicit feedback and input on potential changes that may be needed to meet regulatory requirements. If possible, these agencies will be invited to an in-person site visit to review the proposed concepts for additional feedback and discussions.

b. The team will continue coordination with regulatory and permitting agencies for feedback on permitting needs for implementation, time of year restrictions, and suggested design modifications.

Deliverables. Deliverables for Task 6 include: 1) setting up and facilitating at least two pre-application meetings; 2) meeting materials, meeting notes, and documentation of agency feedback provided; and 3) documentation of major concerns, permitting requirements, and design considerations that can be shared with communities in Virginia to help expedite and inform permitting for future NBS projects.

7. Community Outreach and Engagement (3% of Budget – *funded mainly with in-kind match funding*)

a. The project team will pursue inclusive engagement with local communities, tribal nations, and other stakeholders concurrently with other tasks. The team will share information on current and future projected climate risks and potential solutions, seek feedback on an initial suite of potential NBS projects that enhance resilience, and strive for local buy-in and ownership of chosen solutions. The project team will host informational dialogues at locations and times convenient to local community members and tribal nations.

b. The project team will host and facilitate two Design Charette Workshops with regional and local stakeholders, project partners, and the community on selected alternatives. As noted in Task 3, the first design charette during Task 3 will include completing an MCDA exercise to rank projects that best meet the goals, objectives, and needs of these groups, and to get feedback on the early stage

design concepts. The second design charette during Task 5 will solicit community and stakeholder feedback on the 30% designs.

c. The City of Hampton will leverage the future Fox Hill, Grandview, and Harris Creek neighborhood resilience plan to support robust community engagement within the watershed. This is a $600,000 planning study, scheduled to begin in Winter 2024. While the planning study will address broad community resilience, it will create a resilience vision for the watershed through the design and future implementation of coastal resilience projects. Robust community dialogue is critical to cultivate and support a resilient landscape to sustain the livelihood of residents, many of whom rely on a healthy and sustainable marsh system for their occupations.

Deliverables. Deliverables under Task 7 will include the following: 1) the development of meeting materials and facilitation of outreach meetings, including community meetings and workshops; 2) Facilitation and development of the Design Charette Workshops; 3) Meeting notes from community meetings, workshops; 4) Outreach and education materials, such as website materials, articles, and handouts; 5) A summary of recommended steps for community engagement and outreach that can be provided to guide future NBS development.

B. Implementation Timeline and Milestones: The milestones and timeline proposed for the project tasks and deliverables are outlined on the following table.

Milestone/Deliverable	Start/ End Date	Funds
Finalize NFWF Contract	Dec 2024 - Jan 2025	$3,500
Desktop Analysis Report	Mar 2025 – Jun 2025	$26,000
Field Study Plan, Health and Safety Plan, and Field Data Collection	May – Aug 2025	$165,000
Site Assessment Report	Aug – Nov 2025	$30,000
Comprehensive Vulnerability Analysis	Nov 2025 – Jan 2026	$145,000
10% Conceptual Designs	Feb 2026	$40,000
Design Charette Workshops and MCDA	Mar and Nov 2026	$58,500
Alternatives Analysis Report	Mar – May 2026	$36,000
Sediment Availability and Timing Analysis	Nov 2025 – Jan 2026	$26,000
Four 30% Designs and Associated Documents	Dec 2026	$150,000
Hydrodynamic Modeling Technical Memorandum	May – Aug 2026	$120,000
Regulatory Coordination and Pre-App Meetings	Mar – Dec 2026	$20,000
Community Outreach and Meetings	Mar 2025 – Dec 2026	$25,000*

** Community Outreach and Meetings (not including the design charettes) will largely be completed using $100,000 in additional in-kind match funding*

The requested funding will be $845,000 and will span 24-months from December 2024 to December 2026.

C. Monitoring Project Impact:

No additional metrics will be tracked for this project at this phase of the project.

D. Project Team & Partners:

1. City of Hampton (Project Lead/Applicant) – Key Personnel: Scott Smith, Olivia Askew, Nicole Hutton, Anna Hammond. Scott Smith is the City's Coastal Engineer. He has a PE, and LS. Olivia Askew and Anna Hammond are Resiliency Specialists. Olivia has a background as an urban and environmental planner and GIS analyst. Anna has a background in neighborhood engagement in Hampton. Nicole is the City's Resiliency Officer. She holds a PhD in Geography, Environmental Science, and Policy.

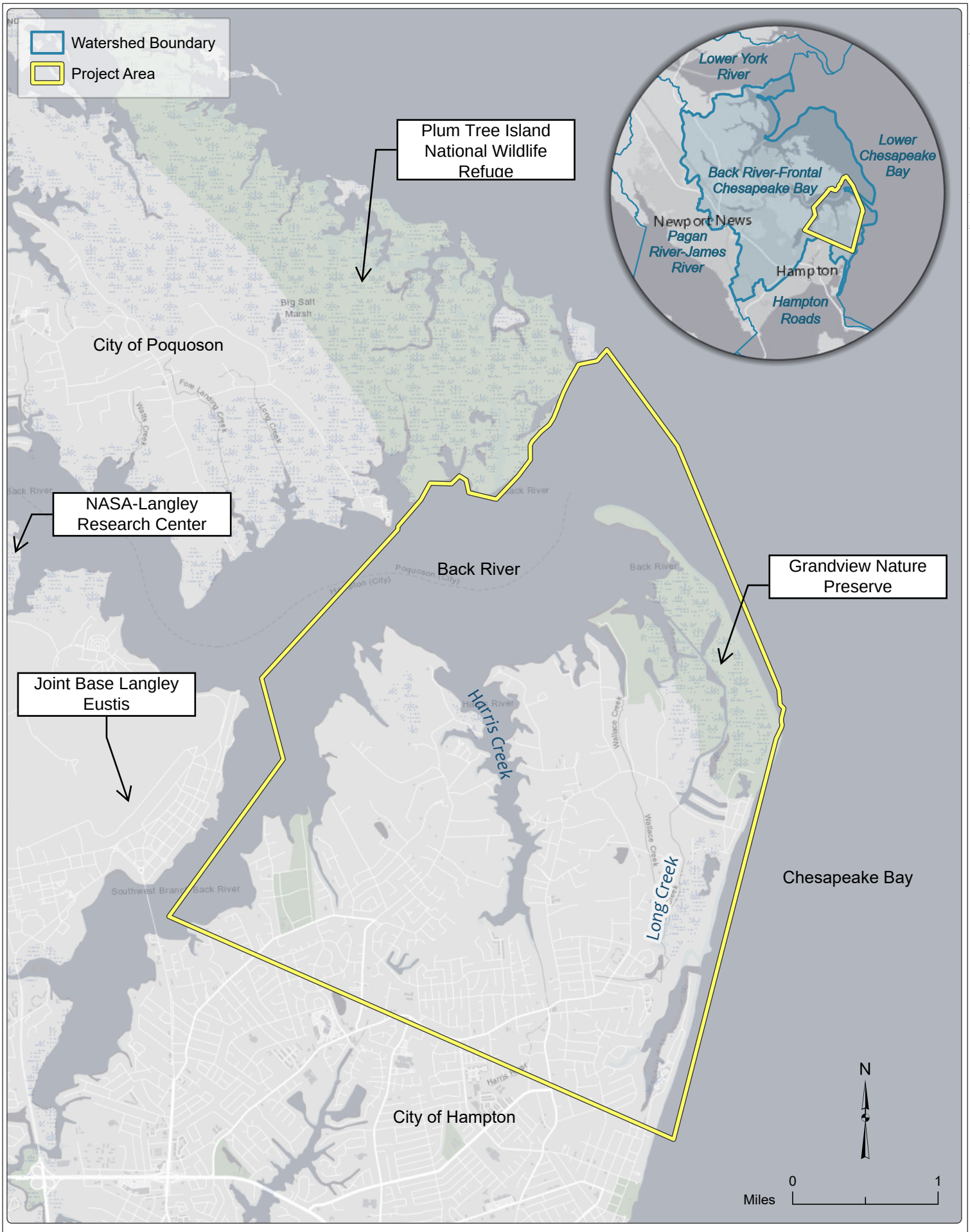
2. Joint Base Langley-Eustis (JBLE) Langley (DoD Project Partner) – Key Personnel: Cecilia Boyd. Cecilia Boyd is the Natural Resources manager and climate resiliency expert at JBLE-Langley with over 5 years of experience in data-driven conservation land management. She has built strong cooperative relationships with local DoD and regulatory partners and will facilitate NEPA and installation support.
3. DoD Chesapeake Bay Program (Stakeholder) – Key Personnel: Kevin DuBois. Kevin DuBois is the DoD Chesapeake Bay Program Coordinator with over 32 years of experience in tidal wetlands, restoration, and public and DoD partnerships.
4. Chesapeake Bay Foundation (Stakeholder) – Key Personnel: Mike Gerel. Mike Gerel is the Virginia Science Manager, with over 30 years in science based, community-centered restoration work, and will offer technical review during project implementation.

The City of Hampton, JBLE, and partners will be working closely on this project. Stakeholders include federal agencies (USFWS, NASA-LARC, USACE Norfolk District, USACE EWN, and the DoD Chesapeake Bay Program); state and regional stakeholders (VMRC, Hampton Roads Planning District Commission, Chesapeake Bay Foundation, and the ERP). Academic stakeholders include the Hampton City Schools, Hampton University, Virginia Institute of Marine Science, the University of Delaware, and the University of Florida, all of whom are engaged in active work in the Back River Estuary.

E. Other (Optional): N/A

F. Uploads & Descriptions: The following photos have been included as uploads:

File Name	Credit	Description
Photo1_LongCreekErosion	Sierra Hildebrandt	*Photo of the erosion along the shoreline of Long Creek within the project area.*
Photo2_AerialGrandviewMarsh	City of Hampton	*Aerial imagery showing the Grandview Nature Preserve marshes where NBS designs will be developed.*
Photo3_AerialLongCreek	City of Hampton	*Aerial imagery showing the diverse ecosystems in the Grandview Nature Preserve that support various species, including the great egret, found hunting in the tidal pond in the foreground of the image.*



Grandview Proposed Project Location

Figure 2

16 SOUTH 17TH STREET | SUITE 100 | RICHMOND, VA 23219 | 804.788.8811 | THEJAMESRIVER.ORG

July 1, 2024

Mirjam Kuzee,
Program Director, Coastal Resilience
National Fish and Wildlife Foundation
1133 Fifteenth Street NW, Suite 1000
Washington, DC 20005

Dear Ms. Kuzee:

On behalf of the James River Association (JRA), I would like to express our support for the proposal submitted by the City of Hampton entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)". The City of Hampton is requesting funding to perform a comprehensive site assessment and preliminary designs intended to enhance the resiliency of marshes and estuarine habitat of Grandview Nature Preserve in Hampton, Virginia, and the larger Back River Estuary. This proposal represents a significant effort to increase the resilience of habitats and communities to sea level rise, extreme weather events, and other climate-related impacts while preserving the natural resources.

JRA is a nonprofit organization with a vision of a fully healthy James River watershed supporting thriving communities. We recognize the importance of the Back River Estuary and Grandview Nature Preserve in the Hampton landscape, providing recreational benefits, habitat, and protection from storm events to nearby communities. These estuaries adjacent to the James River watershed provide a stopover area for migratory bird species, as well as nursery and forage habitat important to the region.

The City of Hampton is an active participant and Steering Committee member in the Living Shoreline Collaborative (LSC), a group of regional and state partners convened by JRA to collaboratively scale up implementation of resilient practices along shorelines in the Hampton Roads region. The proposed project will provide not only benefits to coastal habitats, but examples of Nature-Based Solutions that can be shared with the LSC partners to further the community of practice's efforts in supporting resilient ecosystems and communities.

We hope that you will fund the initiative to help make Hampton Roads a climate ready region and appreciate your consideration of the proposal.

Sincerely,

Jamie Brunkow
Director of River Ecology

COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Building 96
Fort Monroe, VA 23651

Travis A. Voyles
Secretary of Natural and Historic Resources

Jamie L. Green
Commissioner

July 2, 2024

Mirjam Kuzee,
Program Director, Coastal Resilience
National Fish and Wildlife Foundation
1133 Fifteenth Street NW, Suite 1000
Washington, DC 20005

Dear Ms. Kuzee:

I am writing to express the support of the Virginia Marine Resources Commission's Policy Program for the proposal submitted by the City of Hampton (Hampton) entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)". The City of Hampton is requesting funding to perform a comprehensive site assessment and preliminary designs intended to enhance the resiliency of marshes and estuarine habitat of Grandview Nature Preserve in Hampton, Virginia, and the larger Back River Estuary. This proposal represents a significant effort to increase the resilience of important habitats and communities to sea level rise, extreme weather events, and other climate-related impacts while preserving the natural resources upon which the local economy depends.

Funding for this project will enable Hampton and its partners to conduct a thorough site assessment of the Back River Estuary's existing and future conditions and vulnerabilities. This work will allow the project team to develop conceptual designs for a suite of Nature-Based Solutions to support the resiliency of natural lands, communities, and landowners in the Back River.

The Virginia Marine Resources Commission recognizes that a long-term solution is necessary to adequately protect the communities and natural resources of the Back River Estuary. The Back River Estuary and Grandview Nature Preserve are a critical part of the Hampton landscape, providing recreational benefits, habitat, and protection from storm events to nearby communities. This estuary is key to long term sustainability of natural resources under the purview of our agency, local economies.

The Virginia Marine Resources Commission strongly supports the proposed project to advance the site assessment and conceptual designs for the Back River Estuary. This project is the result of community engagement and outreach that has identified this area as a priority area for

improved resilience. If awarded, VMRC will continue collaborating and assisting with the project where possible.

Sincerely,

Rachael Peabody

Rachael Peabody, Director of Environmental Policy
Virginia Marine Resources Commission

HAMPTON ROADS PDC
Douglas G. Pons, Chair | Shannon E. Glover, Vice-Chair
Robert A. Crum, Jr., Executive Director

July 2, 2024

Ms. Mirjam Kuzee
Program Director, Coastal Resilience
National Fish and Wildlife Foundation
1133 Fifteenth Street NW, Suite 1000
Washington, DC 20005

RE: City of Hampton National Coastal Resilience Fund Proposal

Dear Ms. Kuzee:

On behalf of the Hampton Roads Planning District Commission (HRPDC), please accept this letter of support for the City of Hampton's proposal, *Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary*, for funding from the National Coastal Resilience Fund. This project will provide a comprehensive site assessment and preliminary designs for nature-based solutions to enhance the resilience of marshes and estuarine habitat for the Grandview Nature Preserve and Back River Estuary. As a regional partner, we support the City's efforts to use nature-based approaches to increase resilience.

The HRPDC is composed of seventeen local governments representing approximately 1.7 million people. We are one of twenty-one like agencies throughout the Commonwealth of Virginia, with the purposes of encouraging and facilitating local government cooperation within the region and fostering cooperation between local, state, and federal agencies and other partners.

Coastal resilience is a high priority for Hampton Roads. The HRPDC recognizes that a long-term solution is necessary to adequately protect the natural and community resources of the Back River Estuary, which provides habitat, water quality, recreational, storm protection, and other benefits to Hampton, the region, and the Commonwealth. The HRPDC strongly supports Hampton's proposal, which is a result of the city's long-running community-based planning for resilience. This proposal will help further local and regional resilience efforts, which the HRPDC is committed to supporting. We are happy to endorse this project. Thank you for your consideration.

Sincerely,

Benjamin J. McFarlane
Chief Resilience Officer

BJM

CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

June 28, 2024

National Fish and Wildlife Foundation
National Coastal Resilience Fund 2024

Dear Members of the Review Panel:

On behalf of the Chesapeake Bay Foundation (CBF), I would like to offer our support for the City of Hampton's grant application to the National Fish and Wildlife Foundation's 2024 National Coastal Resilience Fund grant program.

CBF is a non-profit organization founded in 1967 and is devoted to the restoration and protection of the Chesapeake Bay. We are the largest independent conservation organization dedicated solely to the fight for effective, science-based solutions to the pollution degrading the Bay and its rivers and streams within the 64,000-square-mile-watershed. CBF has enjoyed a long partnership with Hampton, collaborating on several water quality and resilience projects, including working together to improve the city's stormwater management through a NFWF Small Watershed Grant, as well as collaborating on an Environmental Impact Bond issuance that supported restoration efforts in under-resourced areas of the city. CBF also in the preliminary phases of conducting large-scale oyster reef restoration in Hampton.

CBF is eager to advance Hampton's vision of a more resilient urban area and the proposed project advances nature-based design concepts through the use of thin layer placement, living breakwater structures (oyster reefs), expansion of submerged aquatic vegetation beds, and sand motors. These innovative approaches to resiliency will drive landscape-scale planning to maintain Hampton's Back River wetlands which would otherwise disappear within 80 years. Additionally, this work will improve water quality in the river and subsequently, the Chesapeake Bay. CBF is proud to partner with the city on this important work.

We hope you will look favorable upon Hampton's application. Should you have any questions, please contact me at ceverett@cbf.org.

Sincerely,

Christy Everett
Hampton Roads Director

BROCK ENVIRONMENTAL CENTER
3663 MARLIN BAY DRIVE | VIRGINIA BEACH, VA 23455 | 757-622-1964 | CBF.ORG

COMMONWEALTH of VIRGINIA

Department of Wildlife Resources

Travis A. Voyles
Secretary of Natural and Historic Resources

Ryan J. Brown
Executive Director

June 17, 2024

Mirjam Kuzee,
Program Director, Coastal Resilience
National Fish and Wildlife Foundation
1133 Fifteenth Street NW, Suite 1000
Washington, DC 20005

Dear Ms. Kuzee:

I am writing to express the support of the Virginia Department of Wildlife Resources (DWR) for the proposal submitted by the City of Hampton (Hampton) entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)." The City of Hampton is requesting funding to perform a comprehensive site assessment and to develop preliminary designs intended to enhance the resiliency of marshes and estuarine habitat of Grandview Nature Preserve in Hampton, Virginia, and the larger Back River Estuary. This proposal represents a significant effort to increase the resilience of important habitats and communities to sea level rise, extreme weather events, and other climate-related impacts while preserving the natural resources upon which the local economy depends.

Funding for this project will enable Hampton and its partners to conduct a thorough site assessment of the Back River Estuary's existing and future conditions and vulnerabilities. This work will allow the project team to develop conceptual designs for a suite of Nature-Based Solutions to support the resiliency of natural lands, communities, and landowners in the Back River. The DWR recently completed an assessment of changing climate on its infrastructure in this watershed (Fox Hill boat ramp) and will continue to partner with Hampton regarding shared habitat and infrastructure priorities in this estuary as this project unfolds.

The DWR recognizes that a long-term solution is necessary to adequately protect the communities and natural resources of the Back River Estuary. The Back River Estuary and Grandview Nature Preserve are a critical part of the Hampton landscape, providing recreational benefits, habitat, and protection from storm events to nearby communities. The estuary provides valuable breeding, resting and wintering habitat for more than 20 Species of Greatest Conservation Need identified in Virginia's Wildlife Action Plan.

The DWR strongly supports the proposed project to advance the site assessment and conceptual designs for the Back River Estuary. This project is the result of community engagement and outreach that has identified this area as a priority area for improved resilience. If awarded, the DWR will continue to collaborate and assist with the project where possible.

Sincerely,

Rebecca K. Gwynn
Deputy Director

ELIZABETH RIVER
PROJECT
DO SOMETHING BEAUTIFUL

June 20, 2024

Mirjam Kuzee
Program Director, Coastal Resilience
National Fish and Wildlife Foundation
1133 Fifteenth Street NW, Suite 1000
Washington, DC 20005

Dear Ms. Kuzee,

I am writing to express the full support of the Elizabeth River Project for the proposal submitted by the City of Hampton (Hampton) entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)". This proposal represents a significant effort to increase the resilience of important habitats and communities to sea level rise, extreme weather events, and other climate-related impacts while preserving the natural resources upon which the local economy depends.

The Elizabeth River Project recognizes that a long-term solution is necessary to adequately protect the communities and natural resources of the Back River Estuary. The Back River Estuary and Grandview Nature Preserve are a critical part of the Hampton landscape, providing recreational benefits, habitat, and protection from storm events to nearby communities. The Elizabeth River Porject is keenly aware of the important role a river plays in contributing to the recreaztional and economic value of a region.

This work will allow the project team to develop conceptual designs for a suite of Nature-Based Solutions to support the resiliency of natural lands, communities, and landowners in the Back River. We are excited about the synergistic opportunities this finding will create to work collaboratively with the city of Hampton and Anchor QEA.

The Elizabeth River Project strongly supports the proposed project to advance the site assessment and conceptual designs for the Back River Estuary. This project is the result of community engagement and outreach that has identified this area as a priority area for improved resilience. If awarded, The Elizabeth River Project will continue to collaborate and assist with the project where possible.

Sincerely,

Barbara Gavin

Barbara Gavin
Interim Deputy Director of Restoration

757.399.7487 ElizabethRiver.org 4610 Colley Ave, Norfolk, VA 23508

June 20,2024

Mirjam Kuzee,
Program Director, Coastal Resilience
National Fish and Wildlife Foundation
1133 Fifteenth Street NW, Suite 1000
Washington, DC 20005

Dear Ms. Kuzee:

I am writing to express the full support of the Fox Hill Neighborhood Center Board for the proposal submitted by the City of Hampton (Hampton) entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)". The City of Hampton is requesting funding to perform a comprehensive site assessment and preliminary designs intended to enhance the resiliency of marshes and estuarine habitat of Grandview Nature Preserve in Hampton, Virginia, and the larger Back River Estuary. This proposal represents a significant effort to increase the resilience of important habitats and communities to sea level rise, extreme weather events, and other climate-related impacts while preserving the natural resources upon which the local economy depends.

Funding for this project will enable Hampton and its partners to conduct a thorough site assessment of the Back River Estuary's existing and future conditions and vulnerabilities. This work will allow the project team to develop conceptual designs for a suite of Nature-Based Solutions to support the resiliency of natural lands, communities, and landowners in the Back River. Our organization has conducted three community meetings that focused on flooding, erosion and loss of wetlands in the Back River. Our 1,000 members support efforts to identify ways our city may protect Fox Hill residents.

The Fox Hill Neighborhood Center Board recognizes that a long-term solution is necessary to adequately protect the communities and natural resources of the Back River Estuary. The Back River Estuary and Grandview Nature Preserve are a critical part of the Hampton landscape, providing recreational benefits, habitat, and protection from storm events to nearby communities. Members of the Fox Hill Neighborhood Center have identified several specific threats to public safety including flooding of Beach Road whenever the tide exceeds 4.5 feet about mean low water. The center has created a research project with students at Jones Magnet Middle School where students send out alerts to citizens warning them when the road will be flooded, how deep the water will be and how long it will remain in the road.

The Fox Hill Neighborhood Center Board strongly supports the proposed project to advance the site assessment and conceptual designs for the Back River Estuary. This project is the result of community engagement and outreach that has identified this area as a priority area for improved resilience. If awarded, the Fox Hill Neighborhood Center Board will continue to collaborate and assist with the project where possible.

Thank you for considering Hampton's application. Your support would mean a great deal to the Fox Hill community.

Sincerely,

Lori Evans

Lori Evans, President
Fox Hill Neighborhood Center Board of Directors
65 Hall Road
Hampton, VA 23664

Grandview Island Beach Partners

Grandview Islanders and Friends Joining Together to Protect and Preserve Grandview's Beaches and Public Access

June 25, 2024

Mirjam Kuzee,
Program Director, Coastal Resilience
National Fish and Wildlife Foundation
1133 Fifteenth Street NW, Suite 1000
Washington, DC 20005

Dear Ms. Kuzee:

Grandview Island Beach Partners is a membership organization dedicated to protecting and preserving the beaches and dunes in Grandview. Volunteers planted 6,000 sea oats on the south beach to help increase the resilience of the dunes from storms.

Grandview Island Beach Partners Corp. fully supports the proposal submitted by the City of Hampton (Hampton) entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)". Funding to perform a comprehensive site assessment and preliminary designs intended to enhance the resiliency of marshes and estuarine habitat of Grandview Nature Preserve in Hampton, Virginia, and the larger Back River Estuary is critical to improving the resilience of this entire section of Hampton.

Funding for this project will enable Hampton and its partners to conduct a thorough site assessment of the Back River Estuary's existing and future conditions and vulnerabilities. This work will allow the project team to develop conceptual designs for a suite of Nature-Based Solutions to support the resiliency of natural lands, communities, and landowners in the Back River.

A long-term solution, including break waters, is necessary to adequately protect the communities and natural resources of the Back River Estuary. The Back River Estuary and Grandview Nature Preserve are a critical part of the Hampton landscape, providing recreational benefits, habitat, and protection from storm events to nearby communities. Our organization is committed to building a public private partnership with our local, state and federal government to improve public access to the Nature Preserve and White Marsh Beach on the south end of the island.

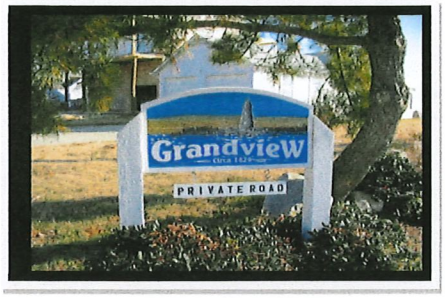
Grandview Island Beach Partners strongly support the proposed project to advance the site assessment and conceptual designs for the Back River Estuary. This project is the result of community engagement and outreach that has identified this area as a priority area for improved resilience. If awarded, Grandview Island Beach Partners will continue to collaborate and assist with the project and stands ready to build public private partnerships to that end.

Thank you for considering Hampton's application. Your support would mean a great deal to the Grandview and Fox Hill.

Sincerely,

Anne Butcher

Anne Butcher, President



Grandview Trust

204 Lighthouse Drive

Hampton, VA 23664

June 20, 2024

Mirjam Kuzee,
Program Director, Coastal Resilience
National Fish and Wildlife Foundation
1133 Fifteenth Street NW, Suite 1000
Washington, DC 20005

Dear Ms. Kuzee:

The Grandview Trust supports the proposal submitted by the City of Hampton entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)". The Grandview Trust is responsible for four private streets and beach in the historic section of Grandview. Consequently, the Trust is concerned with storms which drive waves over the seawall and flood the streets and some homes, especially on Bonita Drive. The Trust is also very concerned about storms breeching the narrow dune separating the Chesapeake Bay from Hawkins Pond.

The City of Hampton is requesting funding to perform a comprehensive site assessment and preliminary designs intended to enhance the resiliency of marshes and estuarine habitat of Grandview Nature Preserve in Hampton, Virginia, and the larger Back River Estuary. This proposal represents a significant effort to increase the resilience of important habitats and communities to sea level rise, extreme weather events, and other climate-related impacts while preserving the natural resources upon which the local economy depends.

The Grandview Trust serves approximately 90 properties and is committed to working with the City of Hampton in establishing breakwaters offshore to reduce the energy from waves which in turn will reduce the damage to the streets and some homes. Breakwaters are one of the long-term solutions that will help protect the homes on the waterfront as well as the streets. The Grandview Trust strongly supports the proposed project because it will advance the site assessment and conceptual designs for the Back River Estuary. Your support would mean a great deal to Grandview Island residents.

Sincerely,

Jamie Chapman

Jamie Chapman, Trustee

Grandview Trust Trustees: Jamie Chapman, 204 Lighthouse Drive. Jamiec0202@gmail.com 757-725-0807. Ronnie Hogge 116 Lighthouse Drive. R_hogge@yahoo.com 757-746-6063. Eunice Wellbrock, 12 Constant Road. unys@verizon.net 757-477-2100

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 633D AIR BASE WING
JOINT BASE LANGLEY-EUSTIS VA

24 Jun 24

Colonel Matthew R. Altman, USAF
Commander
633d Air Base Wing
125 Mabry Ave
Hampton VA 23665

Ms. Kaity Goldsmith
National Fish and Wildlife Foundation
1133 15th St NW #1000
Washington DC 20005

Dear Ms. Goldsmith

I am writing to express the full support of Joint Base Langley-Eustis (JBLE) for the proposal submitted by the City of Hampton entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)". The City of Hampton is requesting funding to perform a comprehensive site assessment and preliminary designs to enhance the resiliency of the Back River Estuary. This proposal represents a significant effort to increase the resilience of important habitats and communities to sea level rise, extreme weather events, and other climate-related impacts while preserving the natural resources upon which the local economy and JBLE-Langley mission readiness depends.

Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, calls on federal agencies to prioritize climate change. Funding for this project will enable Hampton and its partners to conduct a thorough site assessment of the Back River Estuary's existing and future conditions and vulnerabilities driven by climate impacts. This work will allow the project team to develop conceptual designs for a suite of Nature-Based Solutions to support the long-term resiliency of natural lands, communities, and landowners like JBLE-Langley in the Back River. JBLE-Langley will serve as the supporting military service and offer technical assistance for DOD compliance assistance requirements, and strongly supports the proposed project to advance the site assessment and conceptual designs. If awarded, JBLE-Langley will continue to collaborate and assist with the project.

Sincerely

ALTMAN.MATTHEW.R.1049636373 Digitally signed by ALTMAN.MATTHEW.R.1049636373 Date: 2024.06.24 11:32:36 -04'00'

MATTHEW R. ALTMAN, Colonel, USAF
Installation Commander

National Aeronautics and
Space Administration

Langley Research Center
Hampton, VA 23681-2199

June 26, 2024

Reply to Attn of: 020

National Fish and Wildlife Foundation
Attn: Ms. Kaity Goldsmith
1133 15th St NW #1000
Washington, DC 20005

Subject: Nonbinding Letter of Intent for a National Fish and Wildlife Foundation proposal

Dear Ms. Goldsmith:

NASA Langley Research Center (LaRC) is pleased to support the proposal entitled, "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)," being submitted to the National Fish and Wildlife Foundation (NFWF) by Clint Ross, City of Hampton.

Climate resiliency and other related impacts are important to NASA's missions. On June 20, 2024, the NASA 2024-2027 Climate Adaptation Plan was released with the goal of making federal operations increasingly resilient to the impacts of climate change. This plan demonstrates that NASA has an interest in protecting fish and wildlife and sharing knowledge with a wide range of stakeholders. Therefore, should this proposal be selected for funding by the NFWF, it is our intent to share data in efforts related to regional coastal resiliency, subject to availability of NASA resources.

This letter demonstrates NASA LaRC's support of Hampton's proposal submission. However, it does not serve as an endorsement of the City or the proposed investigation, nor does it serve as a commitment of NASA resources. We look forward to working with the City of Hampton on this project, if selected for award.

Sincerely,

Rosemary Baize

Digitally signed by Rosemary Baize
Date: 2024.06.26 15:58:46 -04'00'

Rosemary Baize
Director, Strategic Partnership Office

Rob Farrell
State Forester

COMMONWEALTH of VIRGINIA

Department of Forestry

900 Natural Resources Drive, Suite 800 • Charlottesville, Virginia 22903
(434) 977-6555 • Fax: (434) 296-2369 • www.dof.virginia.gov

June 27, 2024

Mary Bennett
Tidewater Sentinel Landscape Coordinator
Virginia Department of Forestry
27 W. Queens Way, Hampton, VA 23669

Ms. Kaity Goldsmith
National Fish and Wildlife Foundation
1133 15th St NW #1000
Washington, DC 20005

Dear Ms. Goldsmith:

The City of Hampton is requesting funding to perform a comprehensive site assessment and preliminary designs intended to enhance the resiliency of marshes and estuarine habitat of Grandview Nature Preserve in Hampton, Virginia, and the larger Back River Estuary. This proposal represents a significant effort to increase the resilience of important habitats and communities to sea level rise, extreme weather events, and other climate-related impacts while preserving the natural resources upon which the local economy depends. The proposal submitted by the City of Hampton (Hampton) entitled "Developing Landscape-Scale Nature-Based Solutions to Build Resilience in the Back River Estuary (VA)" aligns with the intent of the Tidewater Sentinel Landscape while simultaneously helping to advance our goals in the region.

Funding for this project will enable Hampton and its partners to conduct a thorough site assessment of the Back River Estuary's existing and future conditions and vulnerabilities. This work will allow the project team to develop conceptual designs for a suite of Nature-Based Solutions to support the resiliency of natural lands, communities, and landowners in the Back River, as well as Joint Base Langley Eustis- the anchoring installation for the Tidewater Sentinel Landscape.

Sentinel Landscapes strive to advance sustainable management, strengthen military readiness, preserve natural resources, support working lands, increase access to recreation, and enhance resilience to climate change. This project falls within the boundary of the Tidewater Sentinel Landscape portion of the Virginia Security Corridor and touches on most if not all the key tenants of the Sentinel Landscape program. For these reasons, the Tidewater Sentinel Landscape strongly supports the proposed project to advance the site assessment and conceptual designs for the Back River Estuary and looks forward to seeing these efforts continue beyond planning into implementation.

Sincerely,

Mary E Bennett

Mary Bennett
Tidewater Sentinel Landscape Coordinator
Virginia Department of Forestry
27 W. Queens Way, Ste 100, Hampton, VA 23669
716-560-6467
Mary.Bennett@dof.virginia.gov

SENTINEL LANDSCAPES

NFWF National Coastal Resilience Fund 2024
Full Application Materials – METRICS

Follow the steps below to provide NFWF with metrics for showing progress on your project's primary activities and outcomes.

1. View and select the available metrics

All Project Categories – Community Benefit and Outreach

Project Activity	*Recommended Metric*	*Additional Guidance*
Community Outreach and Engagement	Capacity, Outreach, Incentives – Volunteer participation - # of volunteer hours	Enter the number of volunteer hours in this project.
	Capacity, Outreach, Incentives – Outreach/ Education/ Technical Assistance – # people reached	Enter the number of people meaningfully engaged in the process of the proposed project. Please indicate the groups targeted by outreach efforts and how they will be engaged

Site Assessment and Preliminary Design

Project Activity	*Recommended Metric*	*Additional Guidance*
Site Assessment and Design Plans Development	Capacity, Outreach, Incentives - Volunteer participation - # volunteers participating	Enter the number of volunteers engaged in assessment of sites and preliminary design. In the NOTES, please include the percent design to be completed at the conclusion of the project.
Site Assessment and Design Plans Development	Capacity, Outreach, Incentives – Outreach/Education/Technical Assistance - # of governmental entities participating	Enter the number of municipalities, local, state, and federal government entities participating in the project. In the NOTES, add the names of these institutions and their primary role.

Metric	Strategy	Required	Starting Value	Target Value	Notes

Resilience - Restoration planning/design/permitting - # E&D plans developed	Planning, Research	Recommended	0	4	The project outcomes include the development of four 30% NBS designs for the Back River Estuary.
Resilience - Outreach/ Education/ Technical Assistance - # govt entities participating	Capacity, Outreach	Recommended	2	6	City of Hampton, JBLE are partners. Plan is to engage with several stakeholders (VMRC, USACE, HRPDC, USFWS, DWR, NASA, Poquoson, and others)
Resilience - Outreach/ Education/ Technical Assistance - # people reached	Capacity, Outreach	Recommended	0	150	Project includes extensive community outreach and workshops with community members and regional stakeholder organizations – Fox Hill Neighborhood Center Board, Grandview Island Trust, Grandview Island Beach Partners, Hampton City Schools Environmental Science Academy, and local watermen.

2. You must select and report on at least one metric on this page, and the Foundation's strong preference is for projects to contain a limited number of metrics for showing progress.
3. For each of your selected metrics, enter both Starting Value (i.e., the actual number at the start of your project), and a Target Value (i.e., the projected number at the completion of your project) amounts. Notes may be added to a metric by clicking the sheet icon to the right of the Completion number.

Note: The metrics provided here are those selected by the Foundation. If you would like to report on additional metrics, please include these in your project narrative.

Statement of Litigation

Instructions: Save this document on your computer and complete. The final narrative should not exceed two (2) pages; do not delete the text provided below. Once complete, upload this document into the on-line application as instructed.

Litigation: In the space provided below, state any litigation (including bankruptcies) involving your organization and either a federal, state, or local government agency as parties. This includes anticipated litigation, pending litigation, or litigation completed within the past twelve months. Federal, state, and local government applicants are not required to complete this section. If your organization is not involved in any litigation, please state below.

City of Hampton is a local government body and is not required to complete this Section.

Board of Directors

The City of Hampton is not a nonprofit and does not have a Board.

APPLICANT CONTROLS AND CAPABILITIES QUESTIONNAIRE

INSTRUCTIONS: The Applicant Controls Questionnaire (Questionnaire) is required with the submission of a NFWF full proposal. An authorized representative with adequate knowledge of your organization's capability, competence, resources, policies, and procedures should complete and sign the Questionnaire and submit it along with your organization's most recent Single Audit Report (if applicable). Please do not include copies of policies and procedures unless requested.

NFWF utilizes this Questionnaire to perform a risk assessment and determine an organization's eligibility and capacity to manage a NFWF award. Negative responses do not mean an organization is not eligible for an award. Depending on the type of award and the responses herein, NFWF may require additional documentation and/or reporting requirements to raise an organization's capacity and mitigate any potential compliance, audit, financial, or programmatic risks.

ORGANIZATION LEGAL NAME: City of Hampton

ORGANIZATION EIN: 54-6001336

Audits and U.S. Federal Funding Experience: The following information provides insight into your organization's experience and performance in administering past awards.

1. Does your organization have a current Single Audit report (within the last two years) on file with the Federal Audit Clearinghouse?
   - [X] Yes
   - [ ] No

2. If you responded "Yes" above, does your organization's most recent Single Audit report include any audit findings, material weaknesses, and/or significant deficiencies? If yes, please describe whether your organization has implemented the recommended corrective actions to address the findings. If you responded "No" above, select "N/A".
   - [ ] Yes
   - [X] No
   - [ ] N/A

   Enter response here.

3. Has your organization been suspended or debarred from any government contracting process? If yes, please explain if the suspension and debarment are still in effect.
   - [ ] Yes
   - [X] No

   Enter response here.

4. Has your organization managed a federal award before? If yes, provide a summary of your most recent awards, including period of performance, awarding agency or pass-through entity, federal program, and size of award.

   X Yes

   ☐ No

The City of Hampton is the recipient of many federal awards, both as a pass-through and direct recipient. Outside of ARPA funding, the City routinely receives grants from the Department of Health and Human Services, Department of Homeland Security, Department of Housing and Urban Development, and the Department of Transportation. Given the variety of our federal awards, we cannot describe them all here. Please reference out single audit for more details. The period of performance for each award varies from annually to "until fully expended".

5. In the past three (3) years has your organization, or any unit or office thereof, been audited by an external donor/funder or agent thereof? If yes, please list all such audits and attach copies of final audit reports (if available)

   ☐ Yes

   X No

Enter response here.

Billing and Accounts Tracking Capacities: The following questions help NFWF understand your accounting practices to ensure both NFWF and your organization are able to comply with all funding source requirements.

6. Does your organization have a written accounting manual or written policies and procedures that outline the treatment and safeguarding of assets, methods of cost allocation, if applicable, document retention, cost allowability, etc.? If no, please explain.

   X Yes

   ☐ No

   Enter response here.

7. Does your accounting system (or other management system) allow organizational expenses to be tracked: (a) to a specific project on which your organization is working and, (b) to specific cost-type categories (e.g., personnel, supplies, travel, indirect, etc.)? If no, please describe the limits of expense tracking at your organization.

   X Yes

   ☐ No

   Enter response here.

8. Is your organization able to perform projects on a cost-reimbursable basis? If no, please note that advance payments are considered on a case-by-case basis and are dependent upon your organization's ability to minimize the time elapsing between the receipt and disbursement of funds.

   X Yes

   ☐ No

   Enter response here.

9. If your organization is funded by more than one funder, does the organization have procedures to prevent commingling of funds and to ensure costs are allocated fairly and consistently across the various funders? If no, please explain.

   X Yes

   ☐ No

   Enter response here.

10. Does your organization have a fraud prevention policy that enables the organization to detect, investigate, and report any fraudulent activity immediately? If no, please explain.

    ☐ Yes

    X No

    There is not a Citywide "policy" but through the use of our accounting system, we have methods to prevent against fraud. The Police department investigates fraud.

11. Does your organization have a timekeeping system or documented process that allows staff time (including key personnel) to be tracked to specific funding sources supporting the project? If no, please explain.

    ☐ Yes

    X No

    The City does not have a documented process that allows staff time to be tracked to specific funding sources. If documentation is required the Project manager requests participating staff to submit weekly accounting of time spent on the particular project to document hours spent.

Organizational Policies and Procedures: The following questions help NFWF understand additional organizational practices to ensure compliance with varying funding source requirements.

12. Does your organization maintain formal evidence of employment with its employees, and conduct background checks for each employee before they are hired? If no, please explain.
    - [X] Yes
    - [ ] No

    Enter response here.
13. Does your organization maintain general liability insurance? If no, please explain.
    - [X] Yes
    - [ ] No

    Enter response here.
14. I certify that our organization maintains a written policy on conflict-of-interest that meets the requirements of the federal government. I also certify we will notify NFWF **in writing** if our organization finds a **potential** conflict of interest **relative** to a NFWF-funded project. If no, please explain why you do not feel a conflict-of-interest policy is necessary for your organization or the administration of this project.
    - [ ] Yes
    - [X] No

The City is subject to Virginia's State and Local Government Conflict of Interests Act (https://law.lis.virginia.gov/vacodepopularnames/state-and-local-government-conflict-of-interests-act/), which does not require the locality to adopt our own policy or ordinance

15. I certify that our organization maintains a non-discrimination policy, based on which we would report and act on any instances of potential discriminatory action on the basis of race, color, religion (creed), gender/sex, gender expression/gender identity, age, national origin, disability, marital status, sexual orientation, military status, ancestry, personal appearance, citizen status, pregnancy, child birth or related medical conditions, family responsibilities, matriculation, genetic information, and political or union affiliation, and etc. If not, please explain.
    - [X] Yes
    - [ ] No

    Enter response here.

Questions Specific to Budget Line Items in Your Proposal

16. Does your organization use documented procurement procedures for the acquisition of property or services that ensure full and open competition? If no, please explain. Select "N/A" if your project(s) does not involve the acquisition of property or contractual services.
    - [X] Yes
    - [ ] No
    - [ ] N/A

    Enter response here.

17. Does your organization have a process for determining the appropriate legal instrument (grant agreement vs. contract for goods/services) and has an appropriate legal/contracting officer confirmed that your organization has the ability to implement the contractual arrangements as envisioned? Select "N/A" if your project(s) does not involve subawards or contractual services.

    X Yes
    ☐ No
    ☐ N/A

    Enter response here.

18. Does your organization maintain written policies for property management that include regular inventory audits/verifications? Select "N/A" if your project(s) does not involve equipment or real property.

    ☐ Yes
    ☐ No
    X N/A

    Enter response here.

I certify to the best of my knowledge and belief that the above information is true, complete, and accurate and that I am authorized to submit on behalf of the organization represented above.

SIGNATURE of Authorized Representative Hui-Shan L. Walker

Date 7/2/2024

NAME AND TITLE Hui-Shan L. Walker
Interim Assistant City Manager

CITY OF HAMPTON
OFFICE OF THE CITY ATTORNEY
Approved as to form and legal sufficiency
Date: July 2, 2024
Name:
Title: Deputy City Attorney

APPLICANT CONTROLS AND CAPABILITIES QUESTIONNAIRE

Appendix 1: Glossary

Single Audit Report: Single Audit, previously known as the OMB Circular A-133 Audit, is an organization-wide financial statement and federal awards' audit of a non-federal entity that expends US$750,000 or more in federal funds in one year.

Federal Audit Clearinghouse (FAC): FAC maintains a public database of completed audits, distributes single audit reporting packages to federal agencies, supports the Office of Management and Budget (OMB) in the oversight and assessment of federal award audit requirements, and helps auditors and auditees to minimize the reporting burden of complying with single audit requirements. For the purpose of this Questionnaire, NFWF would like to know whether your organization uploaded the most recent single audit report on FAC (if applicable).

Audit Finding: This refers to a material noncompliance with and violation of provisions of the applicable federal statutes, regulations, internal controls, and terms and conditions of the federal award.

Significant deficiency: This refers to a deficiency or a combination of deficiencies, in internal control over financial reporting, that is less severe than a material weakness. However, it is important enough to merit undertaking corrective action by your organization.

Material weakness: This refers to a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the organization's financial statements will not be prevented, detected, or corrected on a timely basis.

Corrective action: This refers to action taken by an audited organization to correct the identified deficiencies, produces recommended improvements, and demonstrates that deficiencies and audit findings are either invalid or do not warrant auditee action.

Suspension: This refers to an action taken by a debarring official to temporarily exclude or disqualify an organization or a person from bidding on, receiving, or participating in federally funded grants or contracts for a specific period pending the completion of an investigation, legal or administrative proceedings.

Debarment: This refers to an action taken by a debarring official that excludes or disqualifies a person or an organization for a specific period, generally not longer than three (3) years.

Federal award: This refers to financial assistance that a non-federal entity receives directly from a federal awarding agency or indirectly from a pass-through entity.

Awarding agency: This refers to a federal agency that awards a grant or other financial assistance to a recipient directly.

Pass-through entity: This refers to a non-federal entity that provides a sub-award to a sub-recipient to carry out part of a federal program.

APPLICANT CONTROLS AND CAPABILITIES QUESTIONNAIRE

Document retention: This refers to maintaining and keeping financial records, supporting documents, statistical records and all other non-federal entities records pertinent to the federal award.

Cost allowability: This refers to costs that could be incurred because they were allowed under a grant agreement. An allowable cost must be reasonable, such that a prudent person would pay for it.

Indirect costs: This refers to any cost that is not directly identified with a single cost objective but rather a combination of cost objectives.

Cost reimbursable: This refers to a contractual mechanism between two parties whereby payments are made for allowable costs incurred by the other party.

Fraud prevention policy: This refers to the implementation of a strategy to prevent, detect, and report fraudulent activities under an award.

Conflict of interest: This refers to a situation when an individual's personal interests could compromise his/her judgement.

Procurement: This refers to acquisition of goods and services pursuant to applicable procurement requirements.

Grant agreement: This is a legal instrument of financial assistance between a federal awarding agency or pass-through entity and a non-federal entity.

Contract: This is a legal instrument by which a recipient or sub-recipient purchases property or services to carry out the project or program under a federal award.

Equipment: This refers to tangible personal property including information technology (IT) systems having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-federal entity for financial statement purposes or US$5,000.

Real property: This means land including land improvements, structures, and appurtenances excluding moveable machinery and equipment.

Appendix 2: Useful Resources and References

1. Single Audit Requirements: https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-F
2. Financial management requirements (https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-D/section-200.302)
3. Subrecipient and contractor determinations (https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-D/subject-group-ECFR031321e29ac5bbd/section-200.331)
4. Requirements for pass-through entities (https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-D/subject-group-ECFR031321e29ac5bbd/section-200.332)
5. Procurement standards (https://www.ecfr.gov/current/title-2/part-200/subject-group-ECFR45ddd4419ad436d).
6. Audit findings: https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-F/subject-group-ECFRea73e47c9a286e6/section-200.516
7. Conflict of interest: https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-B/section-200.112
8. Equipment requirements: https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-D/subject-group-ECFR8feb98c2e3e5ad2/section-200.313
9. Supplies requirements: https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-D/subject-group-ECFR8feb98c2e3e5ad2/section-200.314
10. Mandatory disclosures: https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-B/section-200.113

2. ***For Projects Requesting U.S. DEPARTMENT OF DEFENSE (DOD) Partner Funding:***

Coastal Hazards: Joint Base Langley-Eustis (JBLE) Langley is more than 75% below the 100-year floodplain and is highly vulnerable to sea level rise (SLR), coastal erosion, conversion of wetlands to open water, storm surge and compound flooding. The only buffer to significant wave impacts on the end of the flightline comes from the low-lying peninsular wetlands and the spit of Plum Tree Island National Wildlife Refuge (NWR) and Grandview Nature Preserve at the mouth of the Back River; habitats which are rapidly eroding and losing relative elevation. Hampton and Langley dredge the Back River every 5 years, but for now the sediment is disposed offsite despite the local need for sediment input. At least three times annually, typical short-recurrence interval rainstorms and high-tides cause flooding that impacts mission readiness by flooding roadways and other critical infrastructure proximate to the shoreline. Present day major storms and flood events cover the airfield, leading to suspension of mission operations. In most cases this requires relocation of the 1st Fighter Wing, the country's premier Air Dominance wing, and equipment and aircraft worth over $7 billion. Additionally, ongoing coastal erosion processes, land subsidence, and relative SLR will lead to a loss of usable land available for mission operations and harm surrounding communities that provide critical transportation routes, housing, utility, and logistical support to JBLE-Langley.

Proposed Nature Based Solutions (NBS) and Benefits: The proposed project will advance several NBS concepts to the 30% design level within the Back River Estuary, including marsh resilience through thin layer-placement, living breakwater structures or oyster reefs, expansion of SAV Beds, and sand motors or ephemeral islands. These concepts will drive landscape-scale planning to maintain Back River wetlands that would otherwise disappear within 80 years, resulting in a 7.5-times magnified fetch at the flightline and greater wave damage and flooding during storms.

The project supports goals outlined in the installation's 2022 Climate Impact Study, 2019 Integrated Natural Resource Plan, and 2022 Installation Climate Resiliency Plan. The investigation of use of dredge material from the Back River for TLP may allow beneficial use of a current waste product while maintaining access to the fuel pier and supporting the U.S. Army Corps of Engineers beneficial use initiative to reuse 70% of its dredged material by the year 2030.

Military Service Support: JBLE-Langley is fully supportive of execution and has provided a letter of support for the efforts. Additionally, Langley will assist in project development review, provide NEPA review, support field surveys as part of site assessment, and assist outreach and stakeholder engagement efforts. JBLE-Langley will look for funding support in completion of the NEPA documentation for project implementation.

Through JBLE-Langley's existing partnerships with the Tidewater Sentinel Landscape and multi-state DoD Chesapeake Bay Program, there is already enthusiastic interest in applying the proposed pilot efforts to inform other coastal military services and non-military partners. Langley is now the anchor installation for the 2.9 million-acre 2023 Tidewater Sentinel Landscape partnership focused on resilience, habitat conservation, and water quality. The Tidewater Sentinel Landscape Program has provided a letter of support for this project noting that the Tidewater Sentinel Landscape strongly supports this project.