

Community Driven Adaptation and Resilience Plan for Oyster, Virginia

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Scope of Work Narrative

Oyster Village, located on the Northampton County seaside on the Eastern Shore of Virginia, is a working waterfront and residential community that is highly vulnerable to rising seas and recurrent flooding. Oyster shorelines, tidal creeks and marshes lead across shallow bays protected by conserved barrier islands to the east. Two counties are located here: Accomack County to the north and Northampton County to the south with a total population of approximately 45,000. The area is rural with a small town feel where the residents take pride in the surrounding nature and the local economy depends on it. For the project described here, Northampton County is proposing to work with Oyster stakeholders to plan, write, and in subsequent years, consider implementation of a Coastal Adaptation and Resilience Plan specifically for the locality of Oyster. The Oyster Plan and process will serve as a roadmap for the potential creation of a larger Northampton County Resilience Plan in the near future.

Oyster has a diversity of critical community assets at risk, which pose unique challenges for flood mitigation. These assets include 35 homes near Oyster Harbor with approximately 125 permanent residents, a community church, public boat ramps and slips (with deep water access), several large clam and oyster aquaculture hatchery/processing facilities, The Nature Conservancy's (TNC) habitat restoration facility, dock and public trail and the University of Virginia's (UVA's) Anheuser-Busch Coastal Research Center (ABCRC) which houses the Long-Term Ecological Research (LTER) project. Oyster has a diversity of stakeholders due to the numerous uses of the land and harbor, each critical to the community and posing unique challenges for flood mitigation.

The following characteristics of this project, which will be discussed throughout this proposal, make an Oyster Plan timely, achievable, and replicable.

- Active community engagement in the town of Oyster, previous planning by Oyster Village and Northampton County, and research leading to risk assessment have laid the groundwork for an Oyster Plan,
- TNC owns over 1,700 acres of land in Oyster including a nearby tract 30' above sea level called Hillcrest Farm, allowing for numerous nature-based solutions and flexibility in project types (i.e. living shorelines, restoration, infrastructure relocation).
- Recent legislation in Virginia that provides resilience project funding, creating the opportunity to fund projects designed in the Oyster Plan.
- The numerous stakeholder sectors present in Oyster and the demographic characteristics of the community require unique solutions that will result in an Oyster Plan that is relevant to other Northampton towns, Eastern Shore communities in general as well as coastal communities nationwide.

Oyster Village is a place rich with maritime history and like many seaside communities on the Eastern Shore of Virginia, is no stranger to adapting to rising seas and flooding waters. Cobb Island Lifesaving Station (now an event center), Travis Chapel United Methodist Church and many homes, in the past 100 years, were barged to Oyster from barrier islands as rising seas and storm activity rendered the barriers uninhabitable. Broadwater Circle (Figure 1) inherited its name from the community on the south end of Hog Island that moved to Oyster, and descendants of those families still live in some of these homes. Oyster Harbor historically and to this day, functions as the port for aquaculture and wild-caught fisheries.

On Virginia's Eastern Shore, assessment of the effects of global climate change on local natural resources and development of adaptation and resilience strategies began back in 2009 and culminated in formation of the (first of its kind in the region) Climate Adaptation Working Group (CAWG) that

continues to work as an effective partnership. The CAWG consists of the following sectors and representatives:

- State and federal agencies – U. S. Fish and Wildlife Service, Virginia Department of Conservation and Recreation, Virginia Department of Wildlife Resources, NASA-Wallops Flight Facility, Virginia Department of Forestry, and Virginia Department of Environmental Quality’s Coastal Zone Management Program
- Local Government – County Board of Supervisors members, mayors, town and county planners, and A-NPDC planners
- Academic research partners (including the University of Virginia and the Virginia Institute of Marine Science)
- Virginia Eastern Shore Land Trust
- Special Assistant to the Governor on Coastal Adaptation and Protection
- The Nature Conservancy’s Virginia Coast Reserve

The CAWG has been meeting quarterly since 2011 and has worked on resilience projects collaboratively including creation of a living shoreline demonstration project on Occohannock Creek in Accomack County and creation of TNC’s online Virginia Eastern Shore Coastal Resilience (CR) Tool (maps.coastalresilience.org/virginia). Working with the CAWG, the County was recently focused on creating a list of resilience projects for inclusion in the Virginia Coastal Resilience Master Plan. This list will also be utilized by the CAWG, County, and localities to prioritize projects and prepare for upcoming funding opportunities in the Commonwealth and beyond.

In 2004, the County worked with the Oyster community and local stakeholders to develop the *Oyster Village Vision* (updated in 2011), included as part of the Northampton County Comprehensive Plan (https://www.co.northhampton.va.us/government/departments_elected_offices/planning_permitting_enforcement/planning/comp_plan). This document expresses an overview vision that “Oyster will be a small historic seaside village that retains its safe, quiet and inviting village character and works cooperatively as a community to: preserve the Village’s traditional continuity with its historic maritime culture and lifestyle, maintain and enhance the quality of natural resources...fundamental to the daily quality of life...and local economy, support the needs of the commercial and recreational users of its waterfront...without compromising the ...rural village way of life, allow for ... change and improvement while preserving its traditional village character and surrounding open space.” One of the goals is that Oyster should have “a coordinated plan and improvements in place for addressing flooding, storm drainage and limiting impervious surfaces in the Village” with an action item to obtain an engineering study of flood and storm drain control and the following specific actions categorized as urgent: survey wetlands, develop comprehensive flood control and conduct a storm design study, create a process to preserve wetlands, and conduct a harbor study needs assessment. Stakeholders from the town of Oyster have met twice in the last two months to begin updating the *Oyster Village Vision* with a focus on resilience and to begin thinking about the creation of a Coastal Adaptation and Resilience Plan.

The long-term partnerships of the CAWG, which have included Northampton County from the outset, and vision planning in Oyster coupled with long-term data and models from the LTER and TNC’s CR Tool as well as the new initiatives surrounding coastal resilience in Virginia have positioned us to succeed in creating and implementing the Oyster Plan.

Vulnerability Assessment

Using the Coastal Resilience Evaluation and Siting Tool (CREST, resilientcoasts.org) from the National Fish and Wildlife Foundation (NFWF), we find that exposure to flooding is high for all of

Oyster Village (Figure 2). The fish and wildlife index is also high for the entire region due to the presence of priority species and their habitats in both the terrestrial and marine environments, including important shorebird and migratory bird habitats. This region is designated as a UNESCO Man and the Biosphere Reserve, one of Audubon's Important Bird Areas and as a site of international importance within the Western Hemisphere Shorebird Reserve Network. The area is also ranked as having high soil erodibility and low slope. The community lies within the 1-foot area for flooding and SLR, indicating more imminent risk to both. The attached Photo 1, taken from a drone over the marsh and looking inland, illustrates this low-lying, critical habitat and the vulnerable infrastructure on the south side of Oyster Harbor.

Similarly, TNC's CR Tool shows much of the harbor and surrounding infrastructure under water under the High (most extreme) SLR scenario for the year 2100 (Figure 3) in addition to flooding a portion of Sunnyside Road, the main thoroughfare and only access to Oyster as well as part of Seaside Road, a main thoroughfare for the region. More pressing, in the year 2050, much of this area is predicted to be under 0.5-1 foot of water (Figure 4). Examples of commonly-occurring flooding already threatening this infrastructure is shown in the attached images (Photos 2&3).

Furthermore, from the CR Tool, we find:

- The entire area of Oyster Village (Figure 1) categorized as Outstanding or Very High on the Virginia Ecological Value Assessment. The Virginia Ecological Value Assessment (VEVA) delineates priority conservation areas ranked by level of importance based on VA Dept. of Game and Inland Fisheries' Priority Wildlife Diversity Conservation Areas, VA Dept of Conservation and Recreation Division of Natural Heritage Conservation Sites Layer (CSL) and Natural Lands Network (NLN), VCU Center for Environmental Studies aquatic resource integrity layer and VIMS College of William and Mary Center for Coastal Resource Management Cumulative Resource Assessment. It was originally published in 2011 by the Virginia Coastal Zone Management Program and was updated for the Eastern Shore in 2014 by The Nature Conservancy.
- All of Broadwater Circle (Figure 1), where many of the homes are located, as well as the end of Sunnyside Road are vulnerable to 3 ft sea level rise. Crumb Hill and Cliffs Road, where more homes, the ABCRC research facility and Cherrystone aquaculture facility are located, are vulnerable to 5-6 ft SLR.
- The Marsh Vulnerability Index for the majority of the marsh along the coast in Oyster is categorized as High or Very High. The marsh vulnerability index (MVI) shows the vulnerability of tidal salt marshes to erosion and inundation. The MVI incorporates high resolution spatial data on eight tidal salt marsh erosion variables: wind wave and boat wake exposure, the elevation and shape of the marsh edge, marsh vegetation characteristics, current rate of sea level rise, and moderate intensity storm surge. These individual variables are assigned a risk value and then combined via a simple spatial computation to reveal an overall erosion and inundation vulnerability. High-risk shorelines have one, or a combination, of the following characteristics: high exposure to wind waves or boat activity, steep and high marsh platform, short or non-existent vegetation, narrow vegetation buffers, high storm surge impacts and rate of sea level rise.

The village of Oyster sits within Northampton County which, based on the ADAPTVA Vulnerability Viewer, is classified as having moderate social vulnerability with a vulnerability index score of 0.9. The table below includes the characteristics as listed in this tool. The ADAPTVA tool uses Census

Tract data for social vulnerability characteristics, where Census Tracts 9303 and 9302 encompass the Village of Oyster.

Classification	Characteristics
Socio-economic	Rural, high dependency on social security, moderate elderly population, moderately low income, moderately high nursing home population, moderately high minority population
Housing	high density, mobile homes, vacant homes, second homes, low rent and long-term renters
Hazardous/Toxic	Very high potential for hazardous/toxic exposure

The Centers for Disease Control (CDC) produce a Social Vulnerability Index (<https://svi.cdc.gov/map.html>) for each county based on Census Tract data. This tool indicates that Northampton County has a moderate to high level of vulnerability. The main contributor to this high vulnerability is minority status and language; however, all categories ranked above the 55th percentile including socioeconomic, household composition and disability, and housing type and transportation. The table below outlines vulnerable population demographics from other online vulnerability mapping tools which use Census as well as other data sources.

Descriptor	Characteristics
Population	15% under the age of 5* 21% over the age of 64* 73% people of color* 11-14% with a disability ⁺
Income	59% low income* 9% unemployed ⁺
Resources	14-16% food insecure ⁺ 18% without computer access ⁺
Education	42% with less than a high school education*

* Source: Environmental Protection Agency, Environmental Justice, <https://ejscreen.epa.gov/mapper/index.html?wherestr=Oyster%2C+VA>

⁺ Source: PolicyMap.com

Outcome(s)

Facilitated by a vetted and hired engineering firm, the Oyster Resilience Steering Committee, with community engagement and participation, will develop the Oyster Coastal Adaptation and Resilience Plan which will (1) document and analyze existing conditions and characterize the extent of Oyster's vulnerability to SLR and recurrent flooding; (2) recommend strategies and projects (living shorelines, road improvements, flood resilient public access areas, and potential infrastructure relocation), with an emphasis on nature-based solutions, that will enhance Oyster's long-term resilience; and (3) facilitate the implementation of the 2004/2011 *Oyster Vision Plan* found on the Northampton County Comprehensive Plan webpage

(https://www.co.northampton.va.us/government/departments_elected_offices/planning_permitting_enforcement/planning/comp_plan) and employ the NFWF-funded CR Tool (maps.coastalresilience.org/virginia) in a community-based adaptation planning project. The Oyster

Plan will set the stage for on-the-ground projects to make Oyster Village more resilient in the face of climate change. The project deliverables will include a project report with data, maps, prioritized strategies for resilience, preliminary engineering plans, cost estimates, and a list of potential funding sources.

Resilience strategies will target both flooding mitigation for the community infrastructure as well as preparing the landscape to be more resilient to rising seas. The plan will outline specific projects and provide options for increasing resilience. These may include, but are not limited to, living shorelines, marsh protection, natural public areas designed for flood control, innovative ideas for current infrastructure that must remain waterfront (such as boat access), and reconfiguring roads/drainage. Additionally, our partner, TNC, owns large parcels of land within the community of Oyster that are 30 feet above sea level and are available for providing resilience solutions (Hillcrest Farm, Figures 1&2). One of the strategies could involve moving infrastructure from the low-lying areas to this higher ground.

The Oyster Plan will provide a framework for the path forward toward resilience by providing a list of prioritized projects with specific details, cost estimates, and targeted funding. It will thus guide the funding and implementation of adaptation and resilience projects to benefit the community and habitat of Oyster Village. Our goal is to have a Plan that defines projects in such a way that they are construction-ready and have funding opportunities identified.

The Oyster Adaptation and Resilience Plan in addition to all subsequent implemented projects will be used as prototypes for creating a resilience plan for all of Northampton County, other locations on the Eastern Shore, in Virginia, and the East Coast of the United States. Oyster Village provides an ideal example location due to the myriad uses and sectors represented, making each of the project plans relevant to most other coastal communities. The fact that Oyster is located in an at-risk, rural, and underrepresented community gives added importance and applicability to this Plan.

Activities

The County, in partnership with TNC and the community and stakeholders of Oyster, will hire an engineering firm to facilitate the creation of the Oyster Plan and lead an Oyster Resilience Steering Committee through this process. The County will lead the effort of contracting an engineering firm and will use funds to increase their capacity to support resilience projects in Northampton County while TNC will lead community outreach. Our specific tasks to inform the Plan are described below and included in the timeline table below. We anticipate the funding cycle to begin in Fall 2021 and extend through Fall 2023.

1. Create and Organize the Resilience Steering Committee

Over the 2021 summer season (pre-award), TNC in partnership with the County will engage representatives from each of the stakeholder sectors present in Oyster to form the Resilience Steering Committee. TNC is currently engaged with a group concerning Horse Island Trail, which can serve as a model for this Steering Committee. While all community members and stakeholders will be invited to be involved in each event relevant to the creation of the Oyster Plan, we expect a commitment from the Steering Committee to represent their specific sector throughout this effort and anticipate that the Steering Committee will have direct engagement with the consultant. To keep the Plan on track, we will schedule monthly meetings of the Resilience Steering Committee and community gatherings (i.e. listening sessions, community events, workshops) quarterly. Stakeholder sectors needed on the Steering Committee include long-term residents, permanent and second-home residents, clam/oyster aquaculture, fishing industry, researchers of UVA's LTER (ABCRC), Board of Supervisors members,

Northampton County staff, A-NPDC planners, TNC and the office of the Special Assistant to the Governor of Virginia on Coastal Adaptation and Protection.

2. *Resilience Steering Committee Enrichment and Development*

The Resilience Steering Committee will visit Chesterfield Heights in Norfolk, VA (Fall 2021). This community received a grant and has already implemented many projects to increase flood resilience while maintaining historic functions and importance. This trip will facilitate learning about how another community has dealt with flooding, including what has worked and what could have been done differently, and how the projects were funded.

3. *Capacity Building*

County staff will attend Certified Floodplain Manager training (Winter 2021). As the Oyster Plan develops, the County will hire a Certified Floodplain Manager to address the expansion of flooding needs.

4. *Define the Issues*

The Resilience Steering Committee will define the extent of the community study area and determine the coastal adaptation and resilience issues to be addressed. To determine the specific issues to be addressed in Oyster, we will engage stakeholders through workshops and listening sessions. These activities will be moderated in such a way as to glean concrete action items. We plan to use the method of achieving consensus when identifying “Community Assets” and target properties.

5. *Identify Risk*

Using the CR and other tools, determine the range of risk Oyster Village may face from recurrent flooding and sea level rise using stakeholder-determined timeframes (i.e., 25, 50, and 100 years) based on likely future scenarios. Vulnerability may also be determined through oral accounts.

6. *Characterize Risk to Community Assets*

Based on the degree of risk, characterize the likely effects of recurrent flooding to the Community Assets for two scenarios: No-Action and Action. Identify and economically quantify Oyster’s Community Assets, public infrastructure, utilities, homes, recreational facilities, farms, aquaculture industry, public institutions, businesses and the community’s culture.

7. *Develop Action Plan*

The Resilience Steering Committee will develop specific coastal adaptation and resilience strategies, action plans, and implementation projects designed to enhance the adaptation and resilience of Oyster’s Community Assets. Our intent is to include project designs with specifications, budgets, potential funding sources and other project details such that the projects are ready as appropriate funding sources become available. Nature based solutions will be prioritized and may include living shorelines, marsh protection/restoration, infrastructure relocation, public space to accommodate flood waters, and innovative ideas (i.e. floating or movable infrastructure). Other projects may include raising or re-routing roads, upgrading drainage, and elevating structures.

8. *Rank Projects/Estimate Costs/Map Funding Possibilities*

The Resilience Steering Committee will rank the implementation projects based on preliminary engineering specifications, cost estimates, anticipated funding, and the risk or

vulnerability of the particular asset. We anticipate seeking funding from potential sources that include NFWF and the CFPF for nature-based solution projects and the Virginia Department of Transportation (VDOT) and others for infrastructure projects such as raising roads and upgrading drainage. We also plan to investigate other state, federal, and local funding opportunities including NSF's Coastlines and People (www.coastlinesandpeople.org) and funding through the Ocean Visions Project (www.oceanvisions.org).

Target Timeframe	Activity
Summer 2021 (pre-award)	Engage Oyster stakeholders to create a formal Oyster Resilience Steering Committee
Summer-Fall 2021 (pre-award)	Community outreach with Oyster community/Resilience Steering Committee
Fall 2021 (pre-award)	Resilience Steering Committee visit to Chesterfield Heights
Winter 2021	Certified Floodplain Manager training
Winter 2021-Spring 2022	Northampton County in partnership with TNC and the Resilience Steering Committee will solicit for and hire an engineering firm
Summer-Winter 2022	Resilience Steering Committee to define the issues and identify and characterize risk
Spring-Fall 2022	Resilience Steering Committee to develop contents of the Oyster Plan
Fall 2022	Northampton County hires full-time Certified Floodplain Manager
Winter-Spring 2022	Resilience Steering Committee to rank projects
Spring-Fall 2023	Contract cost estimates for individual projects
Fall 2023	Finalize the Oyster Plan
Quarterly	Community engagement: community events, listening sessions, workshops
Monthly	Resilience Steering Committee Meetings

Required Application Components (Part IV from the 2021 Grant Manual)

1. Assess capacity needs and assets

- Pre-award, the County will work with the community to create a Resilience Steering Committee with representation from the specific sectors present in Oyster. The Committee will visit a community in Norfolk in Fall 2021 to facilitate learning about how another community has dealt with flooding, including what has worked and what could have been done differently, and how the projects were funded. (see the *Activities* section on pages 6-8 for more details)
- The County intends to increase capacity within the County staff by enrolling one member in Certified Floodplain Manager training in Winter 2021 and as the project moves forward, will hire a Certified Floodplain Manager to address the expansion of flooding needs. (see the *Activities* section on pages 6-8 for more details)
- The County is partnering with The Nature Conservancy – Virginia Coast Reserve to increase capacity for the project. TNC will provide half of the funding (\$150,000) for the engineering firm and will lead community outreach and enrichments efforts.

2. *Goals and objectives tied to improving flood protection and prevention in a whole community approach to resilience. Identify and describe the goals and objectives of the project.*

 - Our goal is to produce a Coastal Resilience and Adaptation Plan with the community of Oyster, VA. The Oyster Plan will include assessment of risk and vulnerability of the resources present in Oyster along with a prioritized list of projects to increase resilience to flooding that will include designs and cost estimates. Please see the section on *Outcomes* on pages 5-6 for more details.
3. *Stakeholder identification, outreach and education strategies.*

 - TNC is already working with members of the Oyster community to identify sectors present and needed to engage for the process of creating the Oyster Plan. Throughout the Fall, sector representatives will be sought to form the Resilience Steering Committee. While all community members and stakeholders will be invited to be involved in each event relevant to the creation of the Oyster Plan, we expect a commitment from the Steering Committee to represent their specific sector throughout this effort and anticipate that the Steering Committee will have direct engagement with the consultant. To keep the Oyster Plan on track, we will schedule monthly meetings of the Resilience Steering Committee and will organize quarterly community gatherings. Please see the *Activities* section on pages 6-8 for more details.
4. *Implementation plan and timelines for specific elements of completion such as training, certifications, plan development, etc.*

Please see the Activities section on pages 6-8 for these details.
5. *Parties responsible for capacity building and/or plan development process.*

 - Both Northampton County and TNC are responsible for capacity building, the County increasing their capacity in the realm of floodplain expertise and TNC leading learning and enrichment activities for the community of Oyster and the Resilience Steering Committee.
 - Plan development will be led by the hired engineering firm with input from the Resilience Steering Committee, on which the County and TNC will be represented.
6. *Performance outputs and measures. Describe the expected results and benefits and how success will be measured.*

 - The overall outcome of the project is to create a Coastal Adaptation and Resilience Plan for the community of Oyster, complete with a list of prioritized projects to increase resilience to flooding for the community.
 - The Oyster Plan will be submitted to DCR for approval. Once approved, we can then seek funding for those defined projects.
 - The Oyster Plan will serve as a prototype for future Adaptation and Resilience Plans for Northampton County as well as other communities within the County.
 - The overall measure of success will be the completion of the Oyster Plan; however, other positive outcomes for the County and the community will be achieved during the creation of this Plan, including capacity building for Northampton County to increase flood

expertise for the purpose of continuing flood resilience work within the County and capacity building for the Oyster community to increase community member knowledge of flooding, anticipated future scenarios, and options for adaptation,

7. *Plans for maintaining capacity, as necessary, over the long term.*

- A member of the Northampton County staff will attend Certified Floodplain Manager training and Northampton County will hire a full time CFM, in year 2, specifically to focus on flooding issues within the County so that work of this type can continue. We anticipate this position to increase our capacity to both work on flooding and resilience issues as well as assist with funding applications and activities.

Required Checklist Items (Appendix D from CFPF Manual)

- Link to current floodplain ordinance:
https://codelibrary.amlegal.com/codes/northhamptoncounty/latest/northhampton_va/0-0-0-16924
- Current Hazard Mitigation plan: <http://www.a-npdc.org/wp-content/uploads/2016/04/FullHMP2016.pdf>

Please note that the 2022 Eastern Shore Hazard Mitigation Plan rewrite is underway with the status at the following link <https://a-npdc.org/accomack-northhampton-planning-district-commission/coastal-resources/hazard-mitigation-planning/>

- Current comprehensive plan:
https://www.co.northhampton.va.us/government/departments_elected_offices/planning_permitting_enforcement/planning/comp_plan

Figures and Photos

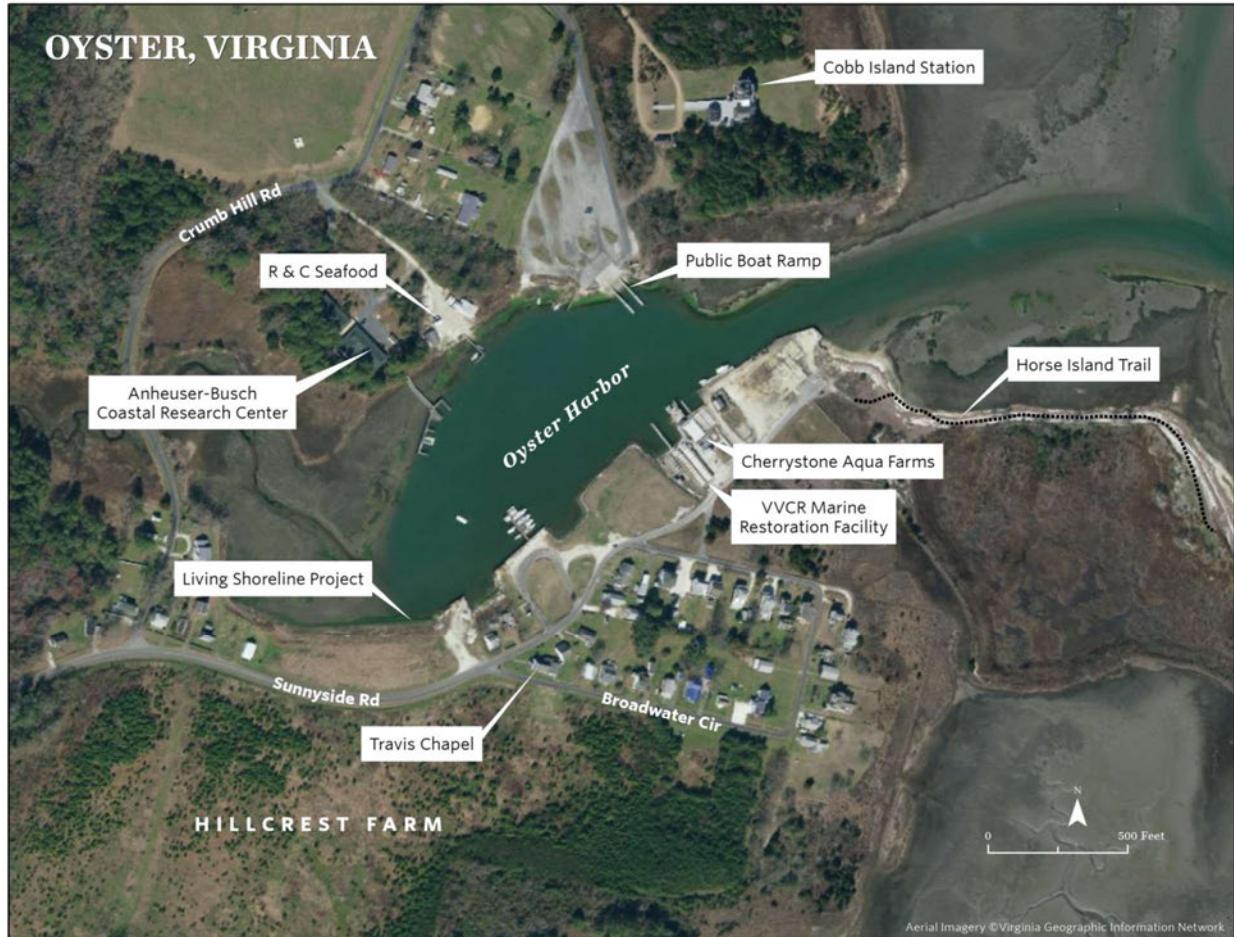


Figure 1 Aerial photo of the harbor area of Oyster, VA.

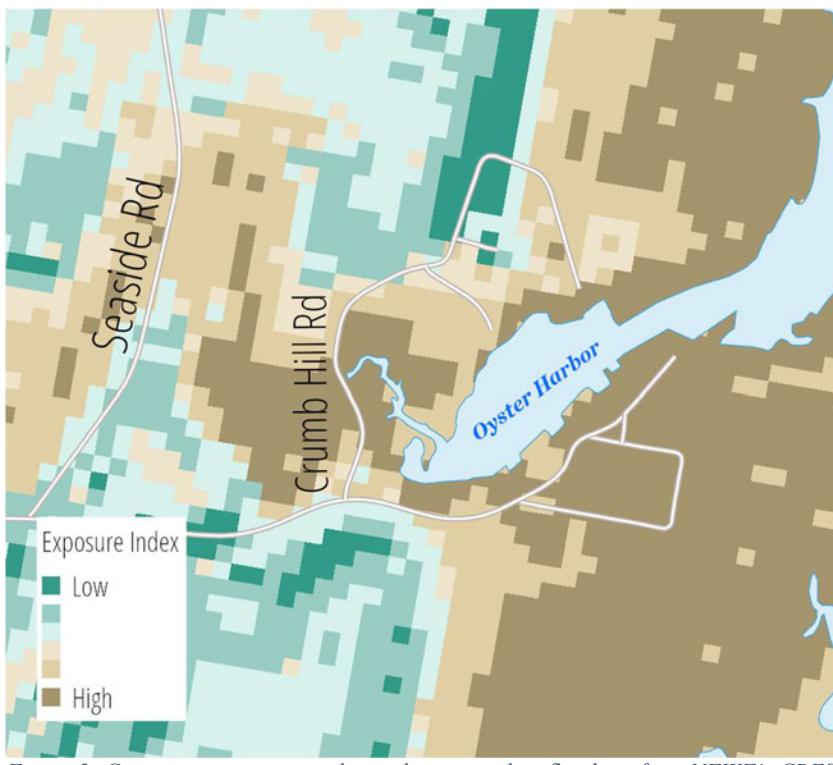


Figure 2: Community exposure index, indicating risk to flooding, from NFWF's CREST tool.

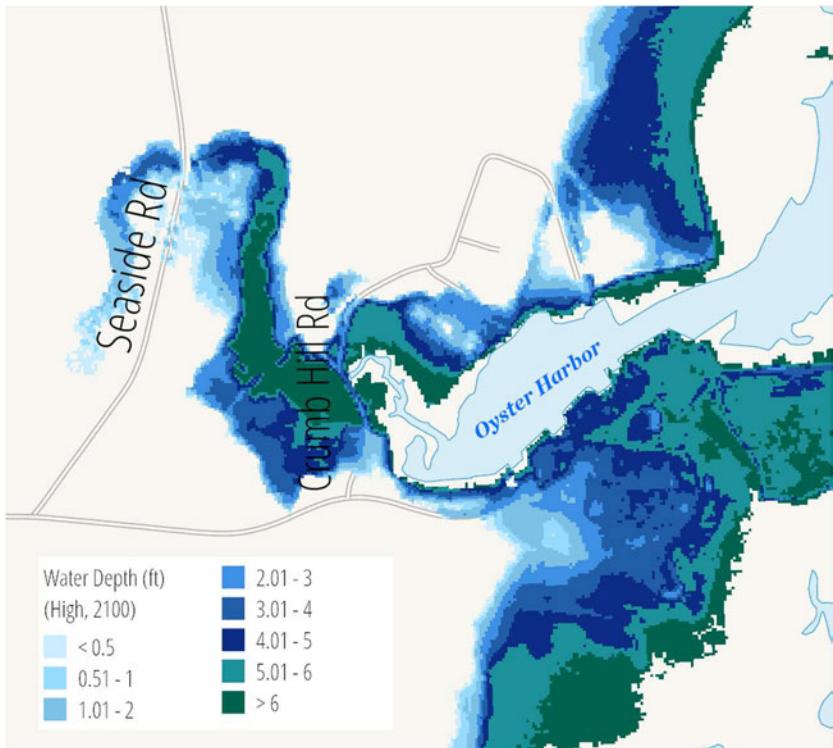


Figure 3: Water depth under the high sea level rise scenario for the year 2100 from TNC's CR Tool.

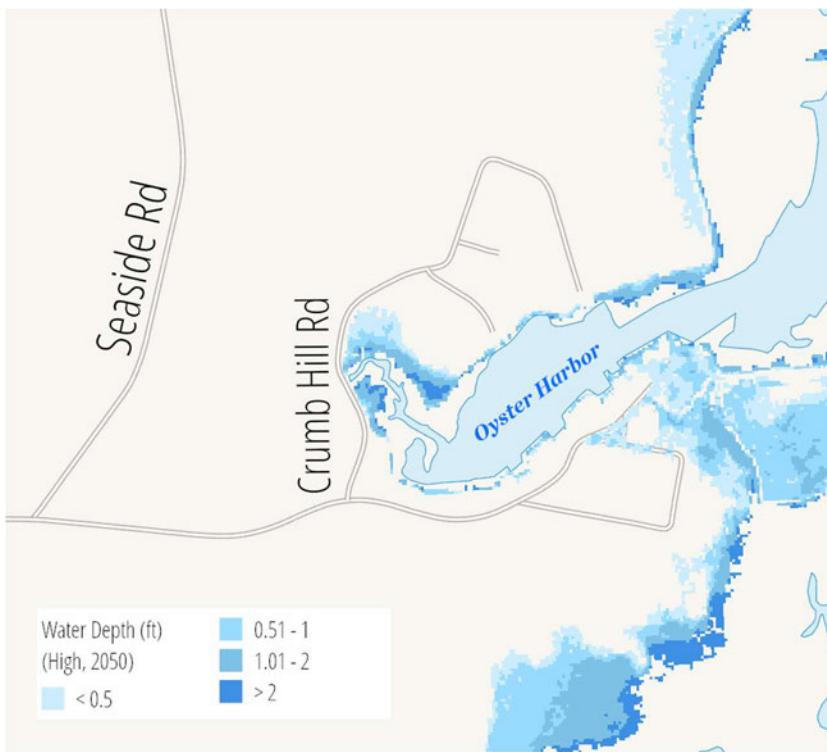


Figure 4: Water depth under the high sea level rise scenario for the year 2050 from TNC's CR Tool.



Photo 1: Drone photo of the south side of Oyster Harbor with infrastructure labeled on Figure 1 visible.



Photo 2: Flooding of TNC's Marine Habitat Restoration facility during an average storm event in spring 2021.



Photo 3: Flooding of Sunnyside Road and Broadwater Circle.

Budget Narrative

Staff time

Northhampton County Staff (direct expenses):

Director- Salary and fringe benefits for time dedicated to participation in Resilience Steering Committee and Oyster community meetings in year 1 and 2 of award plus additional funds for time dedicated to Certified Floodplain Manager training in year 1.

Planner- Salary and fringe benefits for participation in Resilience Steering Committee and Oyster community meetings in years 1 and 2 of award.

Certified Floodplain Manager- Staff time for portion of years 1 (current staff) and hiring new staff for this position in year 2.

The Nature Conservancy (match):

Coastal Science Program Manager- Salary for time dedicated to facilitation of Resilience Steering Committee and participation in Oyster community meetings in years 1 and 2

Outreach and Education Coordinator- Salary for time dedicated to facilitation and participation in Oyster community meetings and events

Contractual

Funds to contract and engineering/consulting firm to lead creation and writing of Adaptation and Resilience Plan for Oyster, Virginia. Total estimated cost for this service is \$300,000; \$150,000 is being requested from the CFPF and the remainder is being supported by The Nature Conservancy (see letter of support- this will not be used as match for this award).

Supplies

Office and other supplies to allow Northhampton County Staff to perform duties associated with this award.

Travel and Fees

Includes mileage for Certified Floodplain Manager training, Resilience Steering Committee and Oyster Community meetings and events; Meals and Lodging for Certified Floodplain Manager training and all fees associated with Certified Floodplain Manager training.

Application Form (Appendix A from CFPF Manual)

Appendix A: Application Form for Grant Requests for All Categories

Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund Grant Program

Name of Local Government:

County of Northampton

Category of Grant Being Applied for (check one):

Capacity Building/Planning

Project

Study

NFIP/DCR Community Identification Number (CID) 510105

If a state or federally recognized Indian tribe, Name of tribe _____

Name of Authorized Official: L. Dixon Leatherbury

Signature of Authorized Official:

Mailing Address (1): □ P.O. Box 66

Mailing Address (2):

City: Eastville State: VA Zip: 23347

Telephone Number: () **Cell Phone Number:** ()

Email Address:

Contact Person (If different from authorized official): Charles Kolakowski

Mailing Address (1): _____ P O Box 66

Mailing Address (2): _____

City: Eastville State: VA Zip: 23347

Telephone Number: (_____, _____) Cell Phone Number: (_____)

Email Address: _____

Is the proposal in this application intended to benefit a low-income geographic area as defined in the Part 1 Definitions? Yes No

Categories (select applicable project):

Project Grants (Check All that Apply)

- Acquisition of property (or interests therein) and/or structures for purposes of allowing floodwater inundation, strategic retreat of existing land uses from areas vulnerable to flooding; the conservation or enhancement of natural flood resilience resources; or acquisition of structures, provided the acquired property will be protected in perpetuity from further development.
 - Wetland restoration.
 - Floodplain restoration.
 - Construction of swales and settling ponds.
 - Living shorelines and vegetated buffers.
 - Structural floodwalls, levees, berms, flood gates, structural conveyances.
 - Storm water system upgrades.
 - Medium and large scale Low Impact Development (LID) in urban areas.
 - Permanent conservation of undeveloped lands identified as having flood resilience value by *ConserveVirginia* Floodplain and Flooding Resilience layer or a similar data driven analytic tool.
 - Dam restoration or removal.
 - Stream bank restoration or stabilization.
 - Restoration of floodplains to natural and beneficial function.
 - Developing flood warning and response systems, which may include gauge installation, to notify residents of potential emergency flooding events.

Study Grants (Check All that Apply)

- Studies to aid in updating floodplain ordinances to maintain compliance with the NFIP or to incorporate higher standards that may reduce the risk of flood damage. This must include establishing processes for implementing the ordinance, including but not limited to, permitting, record retention, violations, and variances. This may include revising a floodplain ordinance when the community is getting new Flood Insurance Rate Maps (FIRMs), updating a floodplain ordinance to include floodplain setbacks or freeboard, or correcting issues identified in a Corrective Action Plan.
- Revising other land use ordinances to incorporate flood protection and mitigation goals, standards and practices.
- Conducting hydrologic and hydraulic studies of floodplains. Applicants who create new maps must apply for a Letter of Map Revision or a Physical Map Revision through the Federal Emergency Management Agency (FEMA). For example, a local government might conduct a hydrologic and hydraulic study for an area that had not been studied because the watershed is less than one square mile. Modeling the floodplain in an area that has numerous letters of map change that suggest the current map might not be fully accurate or doing a detailed flood study for an A Zone is another example.
- Studies and Data Collection of Statewide and Regional Significance.
- Revisions to existing resilience plans and modifications to existing comprehensive and hazard.
- Other relevant flood prevention and protection project or study.

Capacity Building and Planning Grants

- Floodplain Staff Capacity.
- Resilience Plan Development
 - Revisions to existing resilience plans and modifications to existing comprehensive and hazard mitigation plans.
 - Resource assessments, planning, strategies and development.
 - Policy management and/or development.
 - Stakeholder engagement and strategies.

Location of Project (Include Maps): _____ Northampton County VA _____

NFIP Community Identification Number (CID#):(See appendix

F _____ 510105 _____

Is Project Located in an NFIP Participating Community? Yes No

Is Project Located in a Special Flood Hazard Area? Yes No

Flood Zone(s) (If Applicable): _____

Flood Insurance Rate Map Number(s) (If Applicable): _____

Total Cost of Project: \$487,047.58

Total Amount Requested \$306,220.00

Scoresheet (Appendix D from CFPF manual)

Appendix D: Scoring Criteria for Capacity Building & Planning

Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund Grant Program

Applicant Name:		
Eligibility Information		
Criterion	Description	Check One
1. Is the applicant a local government (including counties, cities, towns, municipal corporations, authorities, districts, commissions, or political subdivisions created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth, or any combination of these)?		
Yes	Eligible for consideration	✓
No	Not eligible for consideration	
2. Does the local government have an approved resilience plan and has provided a copy or link to the plan with this application?		
Yes	Eligible for consideration under all categories	
No	Eligible for consideration for studies, capacity building, and planning only	✓
3. If the applicant is <u>not</u> a town, city, or county, are letters of support from all affected local governments included in this application?		
Yes	Eligible for consideration	NA
No	Not eligible for consideration	
4. Has this or any portion of this project been included in any application or program previously funded by the Department?		
Yes	Not eligible for consideration	
No	Eligible for consideration	✓
5. Has the applicant provided evidence of an ability to provide the required matching funds?		
Yes	Eligible for consideration	✓
No	Not eligible for consideration	
N/A	Match not required	

Checklist All Categories | 3-D

Capacity Building and Planning Eligible for Consideration		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Applicant Name:			
Scoring Information			
Criterion	Point Value	Points Awarded	
6. Eligible Capacity Building and Planning Activities (Select all that apply)			
Revisions to existing resilience plans and modifications to existing comprehensive and hazard mitigation plans.	55		
Development of a new resilience plan.	55	55	
Resource assessments, planning, strategies and development.	45	45	
Policy management and/or development.	40		
Stakeholder engagement and strategies.	25	25	
Goal planning, implementation and evaluation.	25	25	
Long term maintenance strategy.	25	25	
Other proposals that will significantly improve protection from flooding on a statewide or regional basis.	15		
7. Is the area within the local government to which the grant is targeted socially vulnerable? (Based on ADAPT VA's Social Vulnerability Index Score.)			
Very High Social Vulnerability (More than 1.5)	15		
High Social Vulnerability (1.0 to 1.5)	12		
Moderate Social Vulnerability (0.0 to 1.0)	8	8	
Low Social Vulnerability (-1.0 to 0.0)	0		
Very Low Social Vulnerability (Less than -1.0)	0		
8. Is the proposed activity part of an effort to join or remedy the community's probation or suspension from the NFIP?			
Yes	10		
No	0	✓	
9. Is the proposed project in a low-income geographic area as defined in this manual?			
Yes	10	10	
No	0		
10. Does this project provide "community scale" benefits?			
Yes	20	20	
No			
Total Points	213		

Checklist All Categories | 3-D

Support Letters



Protecting nature. Preserving life.

The Nature Conservancy in Virginia
Virginia Coast Reserve
P.O. Box 158
11332 Brownsville Rd.
Nassawadox, VA 23413

Tel (757) 442-3049
Fax (757) 442-5418
nature.org

August 26, 2021

Community Flood Preparedness Fund Review Committee:

I am writing this letter to provide support for Northampton County's proposed project, *Community Driven Adaptation and Resilience Plan for Oyster, Virginia*. The Nature Conservancy (TNC) is a partner in this project and will provide collaboration and facilitation both of community engagement activities and the Resilience Steering Committee. In addition, TNC will work in partnership with Northampton County to hire and engage a consultant that will lead the development of the Oyster Plan. We are supporting this project financially with in-kind match (totally \$30,828) which consists of TNC staff time over the two years of the project as well as contributing \$150,000 towards the consultant hiring fee. We also support Northampton County's request to increase its capacity by adding a full time Certified Floodplain Manager. Increased capacity for the County will allow the implementation of this project and similar critical plans, funding and projects that are essential to address adaptation and resilience needs.

This project represents a real effort by a local community and the Commonwealth of Virginia to address coastal resilience in a highly vulnerable, rural landscape by providing a framework that will outline projects, costs and priorities that are necessary to begin to address threats due to sea-level rise and flooding. The Oyster Plan aligns with the Virginia Coastal Resilience Master Plan, and other coastal communities in Virginia are encouraged to create a similar plan that will provide a path forward for projects and funding opportunities. We anticipate the completed Oyster Plan framework will provide a guide for a Northampton County.

Thank you for your support of this project and please feel free to contact me at [REDACTED] or [REDACTED] if you should have specific questions regarding this proposal.

Sincerely,
A handwritten signature in black ink, appearing to read "J.W. Bieri".

J.W. Bieri
Director, Virginia Coast Reserve



A-NPDC

ACCOMACK-NORTHHAMPTON PLANNING DISTRICT COMMISSION
P.O. BOX 417 • 23372 FRONT STREET • ACCOMAC, VIRGINIA 23301
(757) 787-2936 • TOLL FREE (866) 787-3001 • FAX: (757) 787-4221
WEBSITE: www.a-npdc.org

August 26, 2021

Community Flood Preparedness Fund Review Committee

Dear 2021 Review Committee:

On behalf of the Accomack Northampton Planning District Commission (A-NPDC), I am pleased to offer our support for the proposal – *Community Driven Adaptation and Resilience Plan for Oyster, Virginia* – submitted by The Nature Conservancy to the National Fish and Wildlife Foundation’s National Coastal Resilience Fund.

The A NPDC staffs various entities related to these efforts in the region, including: 1) the Climate Adaptation Working Group, who help identify resilience projects and priorities; 2) the Eastern Shore Regional Navigable Waterways Committee which prioritizes navigation projects (dredging) and their associated beneficial use projects; 3) work on the Bay PDC WIP efforts funded by VDEQ; and 4) the Eastern Shore of Virginia Hazard Mitigation Plan, which ensures the protection of life, safety, and property by reducing the potential for future damages and economic losses that result from hazards.

Adaptation and Resilience Plans are critical for communities in increasing coastal resilience and protection for the community and its culture, preserving natural habitat, and using nature-based solutions (NBS) where possible. With the recurrent and widespread flooding experience by Oyster, there is limited access throughout the community and an increased need for a framework to aid in planning coastal mitigation and adaptation strategies. The A NPDC is pleased to partner with TNC to address the spatial diversity of Oyster Village in a manner that will identify priority projects with input from community engagement and stakeholders. This grant will allow for the community to receive assistance in identifying risks, developing an action plan, and estimating costs for project implementation. Additionally, this proposal aligns with the current efforts of the A NPDC in updating the Eastern Shore of Virginia 2021 Hazard Mitigation Plan.

The A NPDC is grateful for this opportunity to partner with TNC and the National Fish and Wildlife Foundation on developing a Community Driven Adaptation and Resilience Plan for Oyster Village and identifying projects for future implementation to improve resiliency along the seaside of the Eastern Shore of Virginia.

If I may be of further assistance or if you have any questions, please do not hesitate to contact me at [REDACTED] -
[REDACTED] or [REDACTED]

Sincerely,

Elaine K.N. Meil
Executive Director



August 26, 2021

From: Tim Rapine
Chief Operating Officer
Ballard Fish and Oyster/Cherrystone Aqua-Farms

To: The Nature Conservancy

Dear Community Flood Preparedness Fund Review Committee:

Our company has been producing quality clams and oysters for 115 years, initiating operations on Virginia's pristine Eastern Shore in 1895. Our production is vertically integrated with inhouse hatchery operations at two locations, as well as significant coastal growout production areas.

I am writing this letter to provide enthusiastic support for The Nature Conservancy's proposed project-*Community Driven Adaptation and Resilience Plan for Oyster, Virginia*.

This project represents a real effort by a local community and the Commonwealth of Virginia to address coastal resilience in a highly vulnerable, rural landscape by providing a framework that will outline projects, costs and priorities that are necessary to begin to address threats due to sea level rise and flooding.

Cherrystone Aqua-Farms has a huge interest in the working waterfront in Oyster and we are supportive of working with TNC and the community to provide a more resilient future for this important coastal Village.

Sincerely,

A handwritten signature in blue ink that reads "Tim Rapine".

Tim Rapine
Ballard Fish and Oyster/Cherrystone Aqua-Farms



COMMONWEALTH of VIRGINIA

Office of the Governor

August 26, 2021

Ann C. Phillips, Rear Admiral, US Navy (Ret)
Special Asst for Coastal Adaptation and Protection
Office of the Governor
1111 East Main Street
Richmond, VA 23219
Ann.phillips@governor.virginia.gov
804-786-0226 (o)
804-387-7425 (c)

Community Flood Preparedness Fund Review Committee

Dear Review Committee:

This letter is to provide enthusiastic support for The Nature Conservancy's proposed Community Capacity Building and Planning project for the National Coastal Resilience Fund 2021 grant opportunity, titled: *Community Driven Adaptation and Resilience Plan for Oyster, Virginia*.

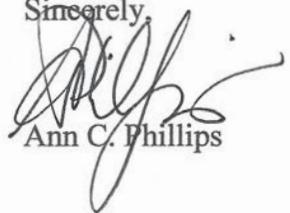
This project represents a real effort by a local community, a team of local and regional partners, and the Commonwealth of Virginia, to address coastal resilience in a highly vulnerable, rural working landscape by providing a framework that will outline projects, costs and priorities that are necessary to begin to address threats due to sea level rise and flooding. The Oyster Plan aligns with the objectives of the Virginia Coastal Resilience Master Plan, now under development, and will serve as a model to other coastal communities in Virginia to encourage them to create a plan that will provide a path forward for projects and funding opportunities.

Oyster Village sits along the seaside of the Eastern Shore of Virginia. The Village is vulnerable to rising seas and ever more frequent and intense storms, and is located adjacent to one of the most studied coastal areas in the world, the Virginia Eastern Shore Barrier Islands. By collecting long-term data, and building future scenario predictions and models through partnerships among research institutions and local communities, The Nature Conservancy helped created the Virginia Eastern Shore Climate Adaptation Working Group (CAWG) and the Virginia Eastern Shore Coastal Resilience Tool to understand this ecologically and environmentally rich region. Working with the diverse community of Oyster- which includes year-round residents, farmers, working watermen and aquaculture farmers, recreational boaters, and UVA's Long Term Ecological Research Program lab - this *Community Driven Adaptation and Resilience Plan for*

Oyster, Virginia, will provide a path forward to align funding and support for projects that will create a resilient and adaptable working seaside community for the future.

Thank you for your consideration of this project, it will serve as a blueprint for Community Capacity Building and Planning for other rural coastal working communities across the Commonwealth of Virginia, and the broader coastal United States.

Sincerely,

A handwritten signature in black ink, appearing to read "Ann C. Phillips".

Ann C. Phillips



August 26, 2021

Review Committee:

I am writing this letter to provide strong support for The Nature Conservancy's proposed project, *Community Driven Adaptation and Resilience Plan for Oyster, Virginia*. This project represents a real effort by a local community and the Commonwealth of Virginia to address coastal resilience in a highly vulnerable, rural landscape by providing a framework that will outline projects, costs and priorities that are necessary to begin to address threats due to sea-level rise and flooding. The Oyster Plan aligns with the Virginia Coastal Resilience Master Plan, and other coastal communities in Virginia are encouraged to create a similar plan that will provide a path forward for projects and funding opportunities.

Oyster Village sits along the seaside of the Eastern Shore of Virginia, which is both highly vulnerable to rising seas and more frequent and intense storms, and is one of the most studied coastal areas in the world. Long-term data, future scenario predictions and models coupled with partnerships among research institutions, local communities and TNC helped created both the Climate Adaptation Working Group (CAWG) and the Virginia Eastern Shore Coastal Resilience Tool. Working with the diverse community of Oyster, which includes year-round residents, farmers, working watermen, recreational boaters, and the University of Virginia's Coastal Research Center, this plan will provide a path forward to seek funding and support for projects that need to be implemented to create a more resilience and adaptable seaside community.

UVA's Virginia Coast Reserve Long Term Ecological Research program, funded by the National Science Foundation, is based in Oyster and has studied climate change and coastal resilience in the region since the late 1980s. We work closely with TNC and other partners in the region and will provide long-term data and realistic future scenarios of sea-level rise and storm surge. These realistic scenarios of climate risks and its uncertainties will help the community make effective adaptation decisions in their planning process. In addition, the Technical Advisory Committee of Virginia's Coastal Resilience Master Plan has been asked to develop a relocation document providing advice on funding and opportunities for retreat should a community chose to do so. The Oyster Master Plan can be a blueprint for other communities to follow in Virginia and other coastal localities in the United States.

Sincerely,

A handwritten signature in black ink, appearing to read "KJMcG".

Karen J. McGlathery
Professor, Department of Environmental Sciences
Director, Environmental Resilience Institute
Lead, Virginia Coast Reserve Long Term Ecological Research Program



CFPF, rr <cfpf@dcr.virginia.gov>

Northampton County CFPF grant application

1 me age

Susan McGhee

Thu, Sep 2, 2021 at 11:43 AM

To: "cfpf@dcr.virginia.gov" <cfpt@dcr.virginia.gov>

Cc Charle Kolakow ki [REDACTED], Di on Leatherbury [REDACTED], Jill Bieri [REDACTED], Janice William [REDACTED]

Please find attached our attached grant application for capacity building and planning with all required attachments. Please let us know if there are any questions regarding the application.

Sincerely,

Susan M. McGhee, PE, PMP

Director of Planning, Permitting & Enforcement

County of Northampton

P.O. Box 538

Eastville, VA 23347

 CID510105 NorthamptonCounty_CFPF.pdf
6022K

CFPF- Oyster Adaptation and Resilience Plan								
FINAL								
October 2021-September 2023		CFPF- Year 1	Match- Year 1 (TNC)	CFPF- Year 2	Match- Year 2 (TNC)	Total CFPF	Total Match	
NHC Staff Time (salary and fringe benefits)								
Director		35,769.00		5,769.00		41,538.00		
Planner		3,725.00		3,725.00		7,450.00		
Certified Floodplain Manager		15,000.00		90,000.00		105,000.00		
Total NHC Staff		54,494.00		99,494.00		153,988.00		
TNC Staff Time								
Coastal Science Program Manager			\$ 6,993.00		\$ 7,202.79		\$ 14,195.79	
Outreach and Education Coordinator			\$ 8,193.00		\$ 8,438.79		\$ 16,631.79	
Total TNC Staff		\$ -	\$ 15,186.00	\$ -	\$ 15,641.58	\$ -	\$ 30,827.58	
TOTAL STAFF		\$ 54,494.00	\$ 15,186.00	\$ 99,494.00	\$ 15,641.58	\$ 153,988.00	\$ 30,827.58	
Contractual								
Engineering Firm to Develop Adaptation and Resilience Plan		\$ 75,000.00		\$ 75,000.00		\$ 150,000.00		\$ 150,000.00
(TNC Contribution to hiring contractor -not counted in match for this grant)		\$ (75,000.00)		\$ (75,000.00)				\$ (150,000.00)
Total Contractual		\$75,000		\$75,000	\$0	\$ 150,000.00	TOTAL	\$ 300,000.00
Supplies								
Office Supplies		\$ 160.00		\$ 100.00		\$ 260.00		
Total Supplies		\$160.00	\$ -	\$100.00	\$ -	\$260.00	\$ -	
Travel and Fees								
mileage		\$ 316.00		\$ 140.00		\$ 456.00		
Meals and Lodging		\$ 886.00				\$ 886.00		
Fees		\$ 630.00				\$ 630.00		
Total Travel and Fees		\$ 1,832.00	\$ -	\$ 140.00	\$ -	\$ 1,972.00	\$ -	
TOTAL		\$ 131,486.00	\$ 15,186.00	\$ 174,734.00	\$ 15,641.58	## \$ 306,220.00	\$ 30,827.58	

Budget in application was incorrect. Discussion with NH Co. yielded this new budget that will be included in the application. wchc 09/3/2021 - Match calculations are off.

Total project = 306220+30827.58=337,048

CFPF Max based on category = 303.343

Match basedon category = 33.705