

November 3, 2021

TRANSMITTED VIA ELECTRONIC MAIL

cfpf@dcr.virginia.gov

c/o Virginia Department of Conservation and Recreation Attention: Virginia Community Flood Preparedness Fund Division of Dam Safety and Floodplain Management 600 East Main Street, 24th Floor Richmond, Virginia 23219

RE: Capacity Building for Flood Resilience in Southern Virginia -- Phase 1: Benchmarking Community Flood Resilience for the City of Martinsville, Town of South Boston, and Town of Halifax

On behalf of the City of Martinsville, the Town of South Boston, and the Town of Halifax, I am pleased to submit a <u>Capacity Building and Planning Application</u> for a Round 2 grant from the Virginia Community Flood Preparedness Fund. The application provides detailed information about the project and the collaborative partnership between these localities, the Southside Planning District Commission, and the University of Virginia.

If you should have any questions or require additional information, please let me know.

Sincerely,

Deborah B. Gosney Executive Director

Attachment

cc: Leon E. Towarnicki, Martinsville City Manager Thomas S. Raab, South Boston Town Manager Carl Espy, IV, Halifax Town Manager Elizabeth M. Marshall, University of Virginia R. Bryan David, University of Virginia

200 S. Mecklenburg Avenue • South Hill, Virginia 23970 • Phone (434) 447-7101 • Fax (434) 447-7104

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: Southside Planning District Commission (SPDC), on behalf of: City of Martinsville, Town of Halifax, and Town of South Boston

Category of Grant Being Applied for (check one):

____Capacity Building/Planning

____Project

_____Study

NFIP/DCR Community Identification Number (CID)	City of Martinsville: 510095 Town of Halifax: 510301 Town of South Boston: 510153	
()		

If a state or federally recognized Indian tribe, Name of tribe N/A
Deborah B. Gosney, Executive Director of SPDC (Please see attached Letters of Support and Signed Name of Authorized Official: Statements for authorization of representation by localities.)
Signature of Authorized Official Control Costley
Mailing Address (1): Southside Planning District Commission
Mailing Address (2): 200 South Mecklenburg Avenue
City: South Hill State: VA Zip: 23970
Telephone Number: (<u>434</u>) <u>447-7101</u> Cell Phone Number: ()
Email Address: dgosney@southsidepdc.org

Application Form CFPF| 1-A

Со	ntact Person (If different from authorized official):N/A
Ma	iling Address (1):
Ma	iling Address (2):
City	y: State: Zip:
Tel	ephone Number: () Cell Phone Number: ()
Em	ail Address:
ls t in t	he proposal in this application intended to benefit a low-income geographic area as defined he Part 1 Definitions? Yes \checkmark No
	(Please see application narrative and attachments for locality-specific details.)
Cat	egories (select applicable project):
	Capacity Building and Planning Grants
Pro	ject 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.

Application Form CFPF| 2-A

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.
 - Solicy management and/or development.
 - Stakeholder engagement and strategies.

City of Martinsville, Town of Halifax, Town of South Boston (Please see attachments for project area maps.)

City of Martinsville: 510095 Town of Halifax: 510301 NFIP Community Identification Number (CID#):(See appendix F_Town of South Boston: 510153

Application Form CFPF| 3-A

Is Project Located in a Special Flood Hazard Area?

Yes No

Flood Zone(s) (If Applicable): Our proposal spans three localities; flood zones vary. Please refer to application materials for more details.

N/A (Please see attachments for FIRMettes Flood Insurance Rate Map Number(s) (If Applicable): <u>detailing known flooding events within each locality.</u>)

Total Cost of Project: \$150,000

Total Amount Requested \$135,000

Application Form CFPF| 4-A

Capacity Building and Planning Application

Capacity Building for Flood Resilience in Southern Virginia -- Phase 1: Benchmarking Community Flood Resilience for the City of Martinsville, Town of South Boston, and Town of Halifax

Prepared by the University of Virginia (UVA) for Southside Planning District Commission, representing the City of Martinsville, Town of Halifax, and Town of South Boston

Please see Appendix A for Application and Appendix B for Checklist and Scoring Criteria.

Scope of Work Narrative

Introduction

Like many communities and regions across Virginia, the effects of climate change and increasing flooding events are having devastating impacts on communities in the southern region of Virginia. The repercussions and cascading effects of flooding events in this region are not limited to local impacts on public safety and roads, community livability, and economic viability; they impact vital regional and statewide economic and transportation corridors as well.

In Virginia, Planning District Commissions are required by law "...to encourage and facilitate local government cooperation and state-local cooperation in addressing on a regional basis problems of greater than local significance." Southside Planning District Commission (SPDC) manages its planning district's hazard mitigation planning as well as certain transportation, land use, and economic development policies. Flooding is a hazard that doesn't respect jurisdictional boundaries or policies and has far-reaching impacts. For this reason, **SPDC**, in partnership with the University of Virginia and on behalf of the City of Martinsville, Town of Halifax, and Town of South Boston, is taking the lead to coordinate and support these communities as they prepare for the future development and implementation of coordinated resilience plans.

Note: The Towns of Halifax and South Boston are members of SPDC. The City of Martinsville is located in the adjacent West Piedmont Planning District. However, while hazard mitigation planning typically begins at the regional level, it is each local government's responsibility to implement and finance individual projects identified in these plans. Therefore, the proposed project is a first-step effort to comprehensively assess the available and foundational elements needed to develop an approvable resiliency plan for each locality. Please see Appendix C for Letters of Support and signed declarative statements that detail this arrangement.

Proposal

This request is the product of a partnership between the University of Virginia and Southside Planning District Commission, on behalf of the affiliate City of Martinsville and the Towns of Halifax and South Boston, to conduct an initial scoping and benchmarking effort. We propose taking a *whole community* approach to assess what resources and elements of flood resilience plans these communities have in hand already to identify gaps that need to be addressed and to develop initial roadmaps to fill those gaps. The proposed scope of work includes:

- Conduct flood risk analysis under current and near-future climate conditions to identify today's and tomorrow's flooding hotspots, to understand flooding mechanisms, to assess the capability of current infrastructure and flood control measures, and to identify and map vulnerable communities.
- Inventory and evaluate the status of existing data, plans, policies, and resources that are necessary to inform the development of successful resilience plans. Identify gaps in information.
- Evaluate "soft" capacities in each community. Assess staff knowledge, skills, and abilities as well as training, resource capacity, certification (Certified Floodplain Manager), and succession planning needs.
- **Examine current channels of community engagement**. Conduct stakeholder mapping exercises and evaluate how existing channels of engagement can be improved and expanded to ensure diverse perspectives are included and equity is addressed throughout the planning process.
- Interview stakeholders and community leaders in order to gain a better understanding of the cascading effect of flood events and to identify equitable ways of ensuring benchmarking and future planning reflects diverse interests.
- **Develop a roadmap and timeline** for the preparation of future Virginia Community Flood Preparedness Fund (VCFPF) planning, studies, and projects grant applications.

This project is designed to yield direct, tangible benefits to the City of Martinsville, Town of Halifax, Town of South Boston, and the SPDC, all of which are inland, low-income geographic areas challenged by riverine flooding risks. See Appendix D for Project Area Map and locality details.

Through this project, these communities will receive valuable, critically needed technical assistance and gain a better understanding of the flood risks they are facing, available resources, and gaps in capacity and needed information. Reports from these scoping efforts will be used to inform future proposals for additional funds to carry forward the work needed to fill the gaps and prepare complete resilience plans that embody effective and coordinated strategies for managing flood risks.

Need for Assistance

Responding to and planning for growing flood risks is difficult for any community. These challenges are especially acute for low-income, historically disadvantaged, underserved communities where local governments and regional planning commissions may not have the inhouse capacity to access and effectively utilize all available resources in addressing the complex issues related to flooding. An article in *The Virginian-Pilot* (3 July 2021) notes that one state official "was concerned that some larger localities, those with more staff, would have a leg up when applying for these grants." He said, "...we would like to spend money on bringing localities that aren't in as advantageous of a place up to higher standards in their capacity to apply for grants and to understand the needs for their communities."¹

Responsive to the issue raised by the state official, this proposal has at its foundation the goal of providing much-needed project development and technical capacity to inland, low-income localities so that they may have the support and resources needed to access and use VCFPF grants to build capacity for flood resilience.

The communities included in this application have a very high degree of social vulnerability, as confirmed by an average ADAPT VA Social Vulnerability Index score across all three localities of 1.53. Additionally, each community qualifies as a low-income geographic area as set forth in the 2021 VCFPF Grant Manual, and each is associated with at least one federally designated Opportunity Zone. This application requests much-needed financial support to enable these localities to begin the process of resilience planning and capacity building in collaboration with the Southside Planning District Commission.

Evidence of their need for assistance is detailed below and in Appendices E, F, and G.

City of Martinsville

Census Geography: The City of Martinsville is composed of five census tracts (numbered 1-5, as shown in the census tract map in Appendix E). Six census tracts are adjacent to the city (101, 102, 103, 105, 106.02, and 108).

Social Vulnerability Index (SVI) Scores: As shown in Table 1 below, three of the city's five census tracts have a "very high" SVI score, one has a "high" SVI score, and another has a "low" SVI score. Census tract SVI scores range from -0.1 (low) to 2.1 (very high), with an average score of 1.4 (high) for the city overall.

Housing Characteristics: All census tracts in Martinsville have some housing that is characterized by *Adapt Virginia* as being old stock, low value, and/or low rent.

¹ Couto, Peter, "With new funding pouring in, Virginia flood program readies for first round of projects," *The Virginian Pilot*, July 3, 2021.

Census	Social Vulnerability Index	Social Vulnerability Index	
Tract	Score	Score Classification	Housing Characteristics
1	2.1	very high	old stock; low rent
2	2.0	very high	old stock; low value
3	1.1	high	old stock; low rent
4	2.0	very high	old stock; low rent
5	-0.1	low	old stock; low rent
Average	1.4	high	

Table 1- Martinsville Social Vulnerability Index Scores and Housing Characteristics

Source: Adapt Virginia, Virginia Vulnerability Viewer and authors' calculations

Household Income and Opportunity Zone Designation: According to American Community Survey (ACS) five-year estimates (2015-2019), median household income in Martinsville is \$34,371, which is only 46 percent of median household income for the Commonwealth of Virginia as a whole (\$74,222). This qualifies Martinsville as a "low-income geographic area" as defined in the 2021 VCFPF Grant Manual.

Two census tracts in Martinsville (1 and 2) qualify as Opportunity Zones. ACS 2015-2019 fiveyear estimates indicate that median household income is about \$28,703 in census tract 1 and \$29,519 in census tract 2, or about 39 and 40 percent of Virginia statewide median household income, respectively.

See Appendix E for maps and supporting documentation.

Town of Halifax

Census Geography: The Town of Halifax is mostly contained within 2010 census tract 9306. Although this tract was divided into two new tracts in 2020 (9306.01 and 9306.02), *Adapt Virginia's Vulnerability Viewer* uses 2010 census geography, so that is what is also used in this application to calculate the average Social Vulnerability Index score for Halifax. A very small section of the town boundary crosses over into census tract 9302.02.

Social Vulnerability Index (SVI) Scores: Both 2010 census tracts associated with the Town of Halifax have "very high" SVI scores, ranging from 1.5 to 2.3 and averaging 1.9 (very high) for the town overall. (See Table 2.)

Housing Characteristics: According to *Adapt Virginia*, Halifax's primary census tract (9306) has a high percentage of mobile homes and long-term renters.

Census	Social Vulnerability Index	Social Vulnerability Index	
Tract	Score	Score Classification	Housing Characteristics
9302.02	1.5	very high	high percentage of mobile homes; homes lacking plumbing; vacant homes; low values and rents; long- term owners
9306	2.3	very high	high percentage of mobile homes; long- term renters
Average	1.9	very high	

Table 2- Halifax Social Vulnerability Index Scores and Housing Characteristics

Source: Adapt Virginia, Virginia Vulnerability Viewer and authors' calculations

Household Income and Opportunity Zone Designation: According to American Community Survey five-year estimates (2015-2019), median household income in Halifax is \$49,688, which is 67 percent of Virginia's median household income (\$74,222). Additionally, Halifax's primary census tract (9306) is designated as an Opportunity Zone. This qualifies Halifax as a "lowincome geographic area" as defined in the 2021 VCFPF Grant Manual.

See Appendix F for maps and supporting documentation.

Town of South Boston

Census Geography: Most of South Boston is located within two 2010 census tracts (9306 and 9308), with smaller portions of the town located in census tracts 9303.01, 9304, and 9305. The 2010 census tract 9306 was divided into two new tracts in 2020 (9306.01 and 9306.02). Much of South Boston is located in new 2020 tract 9306.02, with a small portion of the town located in new 2020 tract 9306.01. Because *Adapt Virginia's Vulnerability Viewer* uses 2010 census geography to display Social Vulnerability Index scores, we do the same in this application to calculate the average Social Vulnerability Index score for South Boston.

Social Vulnerability Index (SVI) Scores: Of South Boston's two primary 2010 census tracts, one (9306) has a "very high" SVI score, and the other (9308) has a "high" SVI score. Of the three census tracts making up smaller portions of the town, two (9303.01 and 9304) have "high" SVI scores, and one (9305) has a "moderate" SVI score.

As shown in Table 3 below, the average Social Vulnerability Index score among all census tracts associated with South Boston is 1.3 (high). However, if the average index score were to be determined using only South Boston's two *primary* census tracts (9306 and 9308), the average Social Vulnerability Index score would be 1.8 (very high).

Housing Characteristics: According to *Adapt Virginia's* housing assessment, all of South Boston's census tracts have a high percentage of mobile homes. Additional housing characteristics common within South Boston include low housing values and rents and longterm owners and renters.

Census Tract	Social Vulnerability Index Score	Social Vulnerability Index Score Classification	Housing Characteristics
9303.01	1.2	high	high percentage of mobile homes; low values and rents
9304	1.1	high	high percentage of mobile homes; low values and rents; long- term owners
9305	0.6	moderate	high percentage of mobile homes; long- term renters
9306	2.3	very high	high percentage of mobile homes; long- term renters
9308	1.3	high	high percentage of mobile homes; low values and rents; long- term owners
Average	1.3	high	

Table 3 – South Boston Social Vulnerability Index Scores and Housing Characteristics

Source: Adapt Virginia, Virginia Vulnerability Viewer and authors' calculations

Household Income and Opportunity Zone Designation: According to American Community Survey five-year estimates (2015-2019), median household income in Halifax is \$42,311, which is 57 percent of Virginia's median household income (\$74,222). Additionally, South Boston's two primary census tracts (9306 and 9308) are designated as Opportunity Zones. This qualifies South Boston as a "low-income geographic area" as defined in the 2021 VCFPF Grant Manual.

See Appendix G for maps and supporting documentation.

Project Details

Multiphase Approach and Timeline

This proposal is for the first phase of a four-phase process. Phase 1 is outlined in the "Proposal" section above; it is essential to understand the as-is state of each of these communities as a first step in preparing to develop a resilience plan. Phase 2 is anticipated to close identified gaps, to conduct capacity and resilience planning, and to develop an approvable resilience plan. Phase 3 will include pursuing additional research, studies, and innovations that would support the implementation of the resilience plan; and Phase 4 will consist of developing and executing flood prevention and protection projects.

We intend to complete Phase 1 work between January and August of 2022.

Community Benefits and Beyond

In addition to the core deliverables proposed, the University of Virginia proposes to approach this project as a pilot to test and develop process templates and roadmaps that could be followed by other low-income, underserved, inland Virginia communities and regions. In subsequent phases, UVA plans to conduct research and build data sets and innovative analytic techniques that could also benefit and be applied in other Virginia regions and communities.

Project Team

Southside Planning District Commission (SPDC) will serve as applicant of record for this joint project and serve as the point of contact for the participating localities, which include the City of Martinsville and the Towns of Halifax and South Boston. SPDC will provide access to regional resources, policies, and initiatives. The SPDC will also serve as fiscal agent and will provide VCFPF grant management and invoicing and prepare and submit VCFPF grant close-out materials as required. While the City of Martinsville is located in the West Piedmont Planning District, it has joined with Halifax, South Boston, and the SPDC for this undertaking. See Appendix C for details of this arrangement.

The Weldon Cooper Center for Public Service at the University of Virginia is dedicated to serving state and local governments and communities across the commonwealth. The Cooper Center will serve as the lead unit for the project, providing project management and overall coordination. The Cooper Center will also lead or assist with evaluation of the "hard" and "soft" resources of the localities, stakeholder engagement and interviews, and the preparation of the project report, including the roadmap for future work leading to completion of resilience plans. The Cooper Center team will be led by <u>Elizabeth Marshall</u>, a seasoned project manager with a background in urban planning who is currently serving as Program Manager for the Virginia

Solar Initiative. Assisting the Cooper Center team will be <u>Dr. Arthur Small</u>, Principal Scientist, a senior economist and data scientist with a background in weather and climate risk management. <u>Bryan David</u> will provide additional engagement support in his capacity as the Cooper Center's Program Director for Southern Virginia. Additional Cooper Center staff will support the project with communications, public outreach, and administrative and financial functions as needed.

The Department of Engineering Systems and Environment at the UVA School of Engineering and Applied Science is home to UVA's highly regarded program in civil and environmental engineering. The UVA Engineering team will play the lead role in conducting the flood risk analysis and in evaluating the existing data, plans, policies, resources, and infrastructure available to formulate resilience plans. The UVA Engineering team will be led by Dr. Majid Shafiee-Jood, Research Assistant Professor of Engineering Systems and Environment, who is a civil engineer specializing in water resources engineering, sustainability, natural hazards, and decision-making. Other UVA Engineering faculty members will support the project as senior technical advisors. Dr. Jonathan Goodall has extensive experience in developing data-driven strategies for stormwater management in the City of Norfolk, Virginia, and can provide valuable insight in relation to resilience plan development for the project areas. Dr. Goodall was recently elected as a member of the Virginia Academy of Science, Engineering, and Medicine. He also recently co-chaired a study on the impacts of climate change in Virginia and presented the results to Virginia's Joint Commission on Science and Technology, with several recommendations for infrastructure management at the state level. Dr. Garrick Louis specializes in water, green infrastructure, and the role of equity and inclusion in infrastructure design and serves as Director of the Small Infrastructure and Development Center. The UVA Engineering team will also include graduate and undergraduate students specializing in civil and environmental engineering working under the guidance of senior investigators.

The Department of Urban and Environmental Planning at the University of Virginia School of Architecture will play a leading role in analysis of land use, planning policies, stakeholder mapping and interviews, and equity and engagement. The Planning group will play a supporting role in the evaluation of "soft" capacities in each community, including assessment of staff training, resource capacity, and staff certifications. The Planning group will be led by <u>Dr. Ellen</u> <u>Bassett</u>, Professor of Urban and Environmental Planning and Associate Dean of Research in the School of Architecture, a specialist in climate change planning and adaptation. Dr. Bassett will be supported by the Institute for Engagement & Negotiation (IEN), an institute affiliated with the Department of Urban and Environmental Planning, by graduate and undergraduate students in urban and environmental planning, and by other resources in the School of Architecture as needed.

Scope of Work Details

1. Assess capacity needs and assets to include:

a. Resource needs identification – financial, human, technical assistance, training.

The proposed program of work includes conducting a baseline assessment that would reveal the current state of resources and capacity available to the three localities. The assessment will reveal resource needs as they pertain to financial, human, technical assistance, and training, and will inform the creation of a roadmap for obtaining the missing resources pursuant to DCR-approvable resilience plans.

b. Plan for developing, increasing, or strengthening knowledge, skills, and abilities of existing or new staff. This may include training of existing staff, hiring personnel, contracting with expert consultants or advisors.

This proposal includes a review and analysis of the "soft" capacities of existing local and regional SPDC staff. We will reveal opportunities to increase knowledge, skill, and abilities, and will identify needed training, personnel, and certifications. Strategies for closing the gaps will be addressed in future phases of this work.

c. Resource development strategies. Where capacity is limited by funding, what strategies will be developed to increase resources in the local government? This may include work with non-governmental organizations or applying for grants, loans, or other funding sources.

This team will inventory the universe of resources available to these three localities to assist them in future phases and in developing resilience plans. Project deliverables will include a catalog used to identify what, how, where, and when localities can obtain and develop needed resources. The University of Virginia and Southside Planning District Commission will serve as consultants to help the localities pursue appropriate resource development strategies, partnerships, and funding support.

d. Policy management and/or development.

This proposed project will provide the localities with the opportunity to examine relevant policies at the regional and local level. In future phases, this will enable them to take a more comprehensive and equitable approach to developing coordinated resilience plans, policies, and projects.

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.

Working simultaneously at the regional and local levels through the Southside Planning District Commission will enable the development of coordinated strategies and resources that can be applied across jurisdictional boundaries and help reduce the financial burdens associated with implementation. Regional-level solutions bring an economy of scale to many of the resources and capital costs associated with resilience plan implementation. For this specific phase of the project, identifying resource gaps experienced by multiple localities presents an opportunity to strategize how to pursue development of missing resources in a manner that efficiently benefits all localities with shared needs.

3. Stakeholder identification, outreach, and education strategies.

This proposal involves taking a *whole community* approach to assess what resources these communities have in hand already and to develop roadmaps to fill any identified gaps in those resources. This approach also includes stakeholder mapping and interviewing in order to learn more about which existing channels of engagement are working well and where there are opportunities for localities and the PDC to expand stakeholder engagement and ensure future phases and planning work reflect the interests and priorities of diverse stakeholders.

4. Implementation plan and timelines for specific elements of completion such as training, certifications, plan development, etc.

This initial phase of work is expected to be conducted between January 2022 and August 2022. At the conclusion of this phase, localities will be equipped with a roadmap and timeline to develop an approvable resilience plan.

5. Parties responsible for capacity building and/or plan development process.

This proposal outlines the key consultants, their areas of expertise, and their roles in Phase 1. A key deliverable for this phase will be a roadmap that summarizes the key resources, hard and soft capacities, and studies that may be required for the development of a resilience plan. Specific strategies for executing the roadmap will be outlined to the extent appropriate, and additional work to identify roles and responsibilities related to executing the plan may be developed in later phases.

6. Performance outputs and measures. Describe the expected results and benefits and how success will be measured.

The overall goal of this phase of the project is to deliver a baseline assessment that identifies the gaps in hard and soft resources and capacities that localities will need to fill in order to develop a successful resilience plan. In addition, the team at UVA will use this process as a pilot to test and develop a model process in order to help other low-income, inland communities prepare to develop their resilience plans. At the conclusion of this project, SPDC and their three partner communities—the City of Martinsville, Town of Halifax, and Town of South Boston—expect the following outputs and measures of success:

<u>Performance Output</u>: Flood Risk Inventory <u>Measure of Success</u>: Identification of high-risk areas, mechanisms for flooding, and cascading impacts.

<u>Performance Output</u>: Comprehensive Inventory of Resources <u>Measure of Success</u>: Identification of gaps in resources needed to develop a DCRapprovable resilience plan.

<u>Performance Output:</u> Stakeholder Mapping and Interviews <u>Measure of Success:</u> Identification of diverse stakeholders, conducting of stakeholder interviews, and documentation of stakeholder perspectives and interests to inform future resilience planning efforts.

Performance Output: Analysis of "Soft" Capacities

<u>Measure of Success</u>: Identification of future staff training and capacity needs and outlining of steps necessary to address those needs in future roadmaps and plans.

Performance Output: Baseline Assessment Process Templates

<u>Measure of Success</u>: Successful testing and development of a baseline assessment process and creation of process templates that can be used to help other low-income, underresourced communities begin the process of resilience planning.

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

As this phase is designed to accomplish benchmarking and to understand the "as-is" state of the three communities, plans for maintaining capacity are not needed at this time. However, we will be benchmarking capacity, which is essential for planning for future growth and longterm maintenance.

Evidence of Flood Events

While the full scope of flood risks has not yet been studied and analyzed, recurring and recent flood events in the subject localities provide evidence that flooding events are negatively impacting each of the communities in the project area. Devastating impacts and disruption to local businesses, regional economic drivers, and transportation networks have been recorded. With evidence of extant and worsening flood challenges, the three communities are eager to begin the process of developing their resilience plans.

See Appendix D for maps and documentation of the flood events described below as well as FIRMettes of flood-prone areas.

City of Martinsville

Road Collapse: Cherokee Trail and Sam Lions near Lanier Lake

In May 2018, part of Cherokee Trail collapsed near Lanier Lake following a very heavy rain. During the flood event, tree limbs and debris clogged the pipe system, which prevented the extensive amount of water from passing through as it would normally.

May 2018: Road collapsed in Martinsville (wdbj7.com)

<u>Town of Halifax</u>

Banister Dam

Banister Lake

Following Tropical Storm Michael in October 2018, the Banister Dam located along the northern boundary of the Town of Halifax was nearly overtopped.

October 2018: https://fb.watch/8Fqdnndkhl/

Town of South Boston

Hupps Mills Plaza

Corner of Tanglewyld Dr. and Beechmont Dr./ 2219 Wilborne Ave. South Boston, VA 24592

In June 2020, flash flooding caused millions of dollars of damage to stores in Hupps Mill Plaza. South Boston experienced nearly eight inches of rain over a three-day period, with the majority of rain falling in just one day. One store in the plaza had 19 inches of water inside the building, which damaged all merchandise. This was the second major flood event at Hupps Mill Plaza within 18 months. Tropical Storm Michael also caused flooding and damage in October 2018. http://www.yourgv.com/news/local_news/creek-overflows-sending-water-racing-into-southboston-shopping-center-causing-millions-of-dollars-in/article_87194674-b1a2-11ea-8acf-7f25351466c4.html

Riverdale Floodplain

Dan River - Intersection of U.S. 501 and 58

The Riverdale area of South Boston routinely gets flooded, with many stores in the area often reporting up to two-and-a-half feet of water inside. In the three years prior to November 2020, the area had flooded about 11 times.

April 2019: <u>http://www.yourgv.com/news/town_of_south_boston/grant-would-give-flood-weary-riverdale-merchants-option-to-sell-land-to-town/article_171ee474-6b89-11e9-a83d-e3dc2252f087.html</u>

November 2020: <u>https://wset.com/news/local/south-boston-businesses-adjusting-to-reality-of-regular-flooding</u>

The intersection of U.S. 58 and 501 in Riverdale is also often closed due to flooding. This has an impact on statewide economic development initiatives. Governor Northam announced the widening of a section of U.S. Route 58 to four lanes over "Lover's Leap" in Patrick County to the west of our partner communities. Once completed, this will create a continuous four-lane U.S. Route 58 from I-77 to Hampton Roads. This will make the truck shipment of goods to and from the Virginia ports much more efficient and is a compelling reason why the periodic closure of the U.S. 58 section in South Boston due to flooding needs to be addressed. There are two additional projects to widen Route 58 between Virginia Beach and I-77. These include projects at Vesta (four miles) and Crooked Oak (7.2 miles). Essentially, it is in the commonwealth's economic interest to support flood preparedness planning in South Boston.

November 2020: <u>http://www.yourgv.com/news/local_news/photos-flooding-closes-intersection-of-u-s-58-501-in-riverdale/collection_04c0a9ea-26bb-11eb-84a8-8b078382d96c.html#1</u>

September 2021: Virginia Governor Ralph Northam - September

Supporting Documentation

Current Floodplain Ordinances / Town Codes

- O City of Martinsville Floodplain Ordinance: <u>https://library.municode.com/va/martinsville/codes/code_of_ordinances?nodeId=CO_C_H6BURE_ARTIINGE_S6-2FLPLOR</u>
- Town of Halifax Floodplain Ordinance: <u>https://www.dropbox.com/s/nf9flgby76lj336/Town%20of%20Halifax%20Floodplain%20</u> <u>Ordinance 10.2009.pdf?dl=0</u>
- Town of South Boston Flood Hazard Overlay District: <u>https://library.municode.com/va/south_boston/codes/code_of_ordinances?nodeId=PTI</u> <u>ICOOR_CH58ZO_ARTIIIDIST_DIV15FLHAOVDI</u>

Current Hazard Mitigation Plans

- Southside PDC: <u>https://www.southsidepdc.org/data-resources/all-downloads/plans-</u> studies-sub-menu/emergency-planning-plans-studies-sub-menu/147-spdc-regional-<u>hazard-mitigation-plan-2020-revised/file</u>
 - Town of Halifax
 - Town of South Boston
- o City of Martinsville: Update Draft for Public Review: <u>https://westpiedmontpdc.org/wp-</u> <u>content/uploads/2021/07/West-Piedmont-Hazard-Mitigation-Plan_2021_DRAFT.pdf</u>

Current Comprehensive Plans

o City of Martinsville:

https://drive.google.com/file/d/15DlrVZ1WroDglhrbLnw1hLZtcewTK-a7/view

- Also, Resilience Plan: <u>https://www.martinsville-va.gov/businesses/community-development/community-resilience</u>
- o Town of Halifax: Dropbox Town of Halifax
- Town of South Boston: <u>https://www.southboston.com/departments/planning/docs/SoBo-</u> <u>CompPlan%20revise%202021.pdf</u>

Budget Narrative

The estimated total cost to bring the project to completion is \$150,000.

In each of the three localities in the project area – City of Martinsville, Town of Halifax, and Town of South Boston – household median income is less than 80% of the Virginia statewide household median income. Each meets the CFPF definition of a low-income geographic area. (See Appendices E-G.) Accordingly, we request 90% support from the Fund and offer a 10% cash match to implement this planning and capacity-building project.

The amount of cash funds available and pledged as match is \$15,000. The three localities in the project area have pledged cash funds that together total \$15,000. The SPDC will invoice each locality for the cash match and reflect receipt of the match in the required grant financial reports. Signed pledge agreements for the City of Martinsville, Town of Halifax, and Town of South Boston are detailed and appended in Appendix C.

The amount of grant assistance requested from the Virginia Community Flood Preparedness Fund is \$135,000. The cover letter to this application package from Deborah Gosney, Executive Director of the Southside Planning District Commission, will serve as the required authorization to request funds from the CFPF.

Essentially all (\$149,000) of the project budget will be allocated to a consulting contract with the University of Virginia (UVA). Project tasks will be carried out by a team, including staff from three units within UVA: the Weldon Cooper Center for Public Service; the School of Engineering and Applied Science, Department of Engineering Systems and Environment; and the School of Architecture, Department of Urban and Environmental Planning. Please see "Project Team" section above for details.

In addition to the subcontract with UVA, the budget includes \$1,000 for expenses related to hosting meetings and workshops that are provided for in the project plan.

The budget detail in Appendix H provides detailed additional information about planned project tasks and associated expenditures.

APPENDICES

A: Application (CFPF APPENDIX A)

B: Checklist and scoring criteria (CFPF APPENDIX D)

C: Letters of Support from localities and Signed Declarations

D: Project area map, Social Vulnerability Index map for greater project area, flood hazard zone maps, flooding event detail maps, and FIRMettes for areas of known flooding within the greater project area

E: City of Martinsville census tract map, ADAPT VA Social Vulnerability Index Score map, Opportunity Zone map, and community income profile

F: Town of Halifax census tract maps, ADAPT VA Social Vulnerability Index Score map, Opportunity Zone map, and community income profile

G: Town of South Boston census tract maps, ADAPT VA Social Vulnerability Index Score map, Opportunity Zone maps, and community income profile

H: Budget details

APPENDIX A: APPLICATION FORM

Application Form for Grant Request

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: Southside Planning District Commission (SPDC), on behalf of: City of Martinsville, Town of Halifax, and Town of South Boston

Category of Grant Being Applied for (check one):

____Capacity Building/Planning

____Project

_____Study

NFIP/DCR Community Identification Number (CID)	City of Martinsville: 510095 Town of Halifax: 510301 Town of South Boston: 510153	
()		

If a state or federally recognized Indian tribe, Name of tribe N/A
Deborah B. Gosney, Executive Director of SPDC (Please see attached Letters of Support and Signed Name of Authorized Official: Statements for authorization of representation by localities.)
Signature of Authorized Official Control Costley
Mailing Address (1): Southside Planning District Commission
Mailing Address (2): 200 South Mecklenburg Avenue
City: South Hill State: VA Zip: 23970
Telephone Number: (<u>434</u>) <u>447-7101</u> Cell Phone Number: ()
Email Address: dgosney@southsidepdc.org

Application Form CFPF| 1-A

Contact Person (If different from aut	thorized officia	l):N/A
Mailing Address (1):		
Mailing Address (2):		
City:	State:	Zip:
Telephone Number: ()	Cell F	Phone Number: ()
Email Address:		
Is the proposal in this application int	ended to bene	fit a low-income geographic area as defined
in the Part 1 Definitions? Yes \checkmark (Please see application narrative and	No d attachments fo	r locality-specific details.)

Categories (select applicable project):

Capacity Building and Planning Grants

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.

City of Martinsville, Town of Halifax, Town of South Boston (Please see attachments for project area maps.)

City of Martinsville: 510095 Town of Halifax: 510301 NFIP Community Identification Number (CID#):(See appendix F_Town of South Boston: 510153

Is Project Located in an NFIP Participating Community? Ves D No				
Is Project Located in a Special	Flood Hazard Area? 🗆 Yes 🗹 No			
Flood Zone(s) (If Applicable): _	Our proposal spans three localities; flood zones vary. Please refer to application materials for more details.			
Flood Insurance Rate Map Nu	N/A (Please see attachments for FIRMettes mber(s) (If Applicable): detailing known flooding events within each locality.)			
Total Cost of Project: \$150,000	0			
Total Amount Requested <u>\$135</u>	5,000			

APPENDIX B: SCORING CRITERIA AND CHECKLIST

Scoring Criteria for Capacity Building & Planning

Checklist for All Categories

Appendix D: Scoring Criteria for Capacity Building & Planning

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

	Applicant Name: Southside Planning District Commission			
	Eligibility Information			
	Criterion		Description	Check One
1.	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	\checkmark
	No	Not elig	gible for consideration	
2.	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	\checkmark
3.	3. If the applicant is <u>not a town, city, or county</u> , are letters of support from all affected local governments included in this application?			
	Yes	Eligible	for consideration	\checkmark
	No	Not elig	gible for consideration	
4.	4. Has this or any portion of this project been included in any application or program previously funded by the Department?			
	Yes	Not elig	gible for consideration	
	No	Eligible	for consideration	\checkmark
5. Has the applicant provided evidence of an ability to provide the required matching funds?				
	Yes	Eligible	for consideration	\checkmark
	No	Not elig	zible for consideration	
	N/A	Match ı	not required	

Capacity Building and Planning Eligible for Consideration			☑ Yes □ No
Applicant Name:	Southside Planning District Commission		
	Scoring Information		
	Criterion	Point Value	Points Awarded
6. Eligible Capacity Bu	ilding and Planning Activities (Select all that apply)		
Revisions to existing res and hazard mitigation p	ilience plans and modifications to existing comprehensive lans.	55	0
Development of a new r	resilience plan.	55	55
Resource assessments,	planning, strategies and development.	45	45
Policy management and	l/or development.	40	40
Stakeholder engagemer	nt and strategies.	25	25
Goal planning, impleme	ntation and evaluation.	25	25
Long term maintenance	strategy.	25	20
Other proposals that will significantly improve protection from flooding on a 15 statewide or regional basis.		15	15
7. Is the area within the local government to which the grant is targeted socially vulnerable? (Based			
Very High Social Vulnera	ability (More than 1.5) Average of three average community scores (14.19.13) = 1.53	15	15
High Social Vulnerability	(1.0 to 1.5)	12	
Moderate Social Vulner	ability (0.0 to 1.0)	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	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		270

Appendix D: Checklist All Categories

Virginia Department of Conservation and Recreation

Community Flood Preparedness Fund Grant Program

Scope of Work Narrative				
Supporting Documentation	Included			
Detailed map of the project area(s) (Projects/Studies)	⊠′Yes □ No □ N/A			
FIRMette of the project area(s) (Projects/Studies)	⊠Yes □No □N/A			
Historic flood damage data and/or images (Projects/Studies)	⊠′Yes □ No □ N/A			
A link to or a copy of the current floodplain ordinance	⊠ Yes □ No □ N/A			
Non-Fund financed maintenance and management plan for project extending a minimum of 5 years from project close	□ Yes □ No ☑ N/A			
A link to or a copy of the current hazard mitigation plan	r Yes □ No □ N/A			
A link to or a copy of the current comprehensive plan	⊠Yes □ No □ N/A			
Social vulnerability index score(s) for the project area from <u>ADAPT VA's Virginia Vulnerability Viewer</u>	⊠′Yes □ No □ N/A			
If applicant is not a town, city, or county, letters of support from affected communities	⊠′Yes □ No □ N/A			
Completed Scoring Criteria Sheet in Appendix B, C, or D	⊠Yes □No □N/A			
Budget Narrative				
Supporting Documentation	Included			
Authorization to request funding from the Fund from governing body or chief executive of the local government	⊠′Yes □ No □ N/A			
Signed pledge agreement from each contributing organization	⊠ Yes □ No □ N/A			

APPENDIX C: LETTERS OF SUPPORT

Letters of Support: City of Martinsville Letters of Support: Town of Halifax Letters of Support: Town of South Boston



City Manager Leon E. Towarnicki City Attorney Eric H. Monday Clerk of Council Karen Roberts

November 1, 2021

On behalf of the City of Martinsville and in my capacity as the Chief Administrative Officer, I hereby authorize the Southside Planning District Commission to submit the <u>Capacity Building for Flood Resilience in Southern Virginia -- Phase 1</u> application to the <u>Virginia Community Flood Preparedness Fund</u>. Further, the City of Martinsville has the fiscal resources in the FY2021-2022 budget to contribute \$8,620.00 as the per capita share of the required ten percent (10%) local cash match for the project in partnership with the Town of South Boston and the Town of Halifax.

Leon Towarnicki

Leon E. Towarnicki City Manager





City Manager Leon E. Towarnicki City Attorney Eric H. Monday Clerk of Council Karen Roberts

Southside

October 14, 2021

TRANSMITTED VIA ELECTRONIC MAIL

Dr. Arthur Small Mr. Bryan David Weldon Cooper Center for Public Service University of Virginia Charlottesville, VA

RE: Virginia Community Flood Initiative

Dear Dr. Small and Mr. David:

This letter confirms the City of Martinsville's interest in the above-referenced undertaking by the Weldon Cooper Center for Public Service (Cooper Center) and the School of Engineering and Applied Sciences (School of Engineering) to develop an application to be submitted to the Virginia Community Flood Preparedness Fund (VCFPF) managed by the Virginia Department of Conservation and Recreation (VDCR).

You and your colleagues may proceed to prepare an application on behalf of the City of Martinsville for submission to the VCFPF for a grant to fund the following work:

<u>Assessment and Roadmap (Phase I)</u> – identifying, inventorying, and evaluating existing data, plans, resources, methods for data collection and analysis, and related information; and developing a roadmap (time-line) for future phases of VCFPF grant-funded plans and projects.

Following a review of the final application and upon the City of Martinsville's approval, the application will be submitted to the VCFPF Round #2 deadline set for Friday, November 5th, at 4:00 pm.

The Cooper Center will coordinate and include the City of Martinsville's application as part of a joint application being developed by the Cooper Center and the School of Engineering for the Southside Planning District Commission and its member localities of the Town Halifax and the Town of South Boston. Dr. Arthur Small Mr. Bryan David October 14, 2021 Page 2

By mutual agreement, the ten percent (10%) local cash match required by the VCFPF will be shared through a per capita contribution between the Town of Halifax, the City of Martinsville, and the Town of South Boston, as follows:

VCFPF Assessment and Roadmap Budget (Phase I) = \$150,000.00 Local Cash Match = \$15,000.00

The total population for these localities is 21,562 (2020 US Census), which computes to a per capita rate of \$0.695 and a rounded contribution of:

	Population	
Town of Halifax	1,188	\$ 831
City of Martinsville	12,404	8,629
Town of South Boston	7,966	5,541
		\$ 15,000

The City of Martinsville and I look forward to working with the Cooper Center, the School of Engineering, our partner communities, and the Southside Planning District Commission to successfully access the Virginia Community Flood Preparedness Fund.

Yours truly,

Leon Towarnicki

Leon E. Towarnicki City Manager

cc: Carl Espy, IV, Town Manager, Town of Halifax Tom Raab, Town Manager, Town of South Boston Deborah Gosney, Executive Director, Southside Planning District Commission D.T.P. Gilliam, Jr. Mayor

Carl Espy, IV Town Manager

Council G. W. Bosiger M.W. Bowen W. R. Covington S. J. Dunavant, Jr. J. B. Powell J. D. Thackston Town of Halifax Post Office Box 627 Halifax, Virginia 24558 (434) 476-2343

November 1, 2021

-- VIA E-MAIL --

Weldon Cooper Center for Public Service University of Virginia Charlottesville, Virginia Attn: Dr. Arthur Small Mr. Bryan David

RE: Capacity Building for Flood Resilience in Southern Virginia -Phase I Application Authorizing Assistance from the Southside Planning District Commission (SSPDC)

Dr. Small and Mr. David:

This letter confirms the Town of Halifax, Virginia's interest in the above-referenced application and additionally declares that in my capacity as the Town Manager/Treasurer, I hereby authorize the Southside Planning District Commission (SSPDC), to submit the Capacity Building for Flood Resilience in Southern Virginia -- Phase I application to the Virginia Department of Conservation and Recreation (DCR), for the Virginia Community Flood Preparedness Fund.

Furthermore, I hereby affirm the Town of Halifax, Virginia has the fiscal resources in the FY 2021-2022 budget to contribute \$831.00 as the per capita share of the required ten percent (10%) local cash match for the project in partnership with the City of Martinsville, Virginia and the Town of South Boston, Virginia.

Respectfully Yours,

Carl Espy, IV Town Manager/Treasurer

cc:Leon E. Towarnicki, City Manager-Martinsville, VA, Thomas S. Raab, Town Manager-South Boston, VA, Deborah Gosney-Executive Director, Southside Planning District Commission

Town of Halifax Post Office Box 627

Post Office Box 627 Halifax, Virginia 24558 (434) 476-2343

TOWN OF

Carl Espy, IV Town Manager

Mayor

D.T.P. Gilliam, Jr.

Council G. W. Bosiger M.W. Bowen W. R. Covington S. J. Dunavant, Jr. J. B. Powell J. D. Thackston

October 22, 2021

-- VIA E-MAIL --

Weldon Cooper Center for Public Service University of Virginia Charlottesville, Virginia Attn: Dr. Arthur Small Mr. Bryan David

RE: Virginia Community Flood Initiative

Dear Dr. Small and Mr. David:

This letter confirms the Town of Halifax's interest in the abovereferenced undertaking by the Weldon Cooper Center for Public Service (Cooper Center) and the School of Engineering and Applied Sciences (School of Engineering) to develop an application to be submitted to the Virginia Community Flood Preparedness Fund (VCFPF) managed by the Virginia Department of Conservation and Recreation (DCR).

You and your colleagues may proceed to prepare an application on behalf of the Town of Halifax for submission to the VCFPF for a grant to fund the following work:

> Assessment and Roadmap (Phase I) - identifying, inventorying, and evaluating existing data, plans, resources, methods for data collection and analysis, and related information; and developing a roadmap (time-line) for future phases of VCFPF grant-funded plans and projects.

Following a review of the final application and upon the Town of Halifax's approval, the application will be submitted to the VCFPF Round #2 deadline set for Friday, November 5th, at 4:00 pm.

The Cooper Center will coordinate and include the Town of Halifax's application as part of a joint application being developed by the Cooper Center and the School of Engineering for the City of Martinsville and the Town of South Boston. These applications will be coordinated with the Southside Planning District Commission for submission to VCFPF.
Dr. Arthur Small Mr. Bryan David October 22, 2021 -Page 2

By mutual agreement, the ten percent (10%) local cash match required by the VCFPF will be shared through a per capita contribution between the Town of Halifax, the City of Martinsville, and the Town of South Boston, as follows:

> VCFPF Assessment and Roadmap Budget (Phase I) = \$150,000.00 Local Cash Match = \$15,000.00

The total population for these localities is 21,562 (2020 US Census), which computes to a per capita rate of \$0.695 and a rounded contribution of:

영양 위험 소리를 빌고 있는 수요?	Population	
Town of Halifax	1,188	\$ 831
City of	12,408	8,629
Martinsville		
Town of South	7,966	5,541
Boston		
집 문화 관계 한 것이다.	19월 19일 년	\$ 15,000

On behalf of the Town Council of Halifax, Virginia and all those within the community we serve, I look forward to working with the Cooper Center, the School of Engineering, our partner communities, and the Southside Planning District Commission to secure Virginia Community Flood Preparedness Fund monies.

Respectfully Yours,

Carl Espy, IV Town Manager

cc:Leon E. Towarnicki, City Manager-Martinsville, VA, Thomas S. Raab, Town Manager-South Boston, VA, Deborah Gosney-Executive Director, Southside Planning District Commission



455 Ferry Street | South Boston, Virginia 24592 | 434-575-4200 | traab@southbostova.us

November 1, 2021

On behalf of the Town of South Boston and in my capacity as the Chief Administrative Officer, I hereby authorize the Southside Planning District Commission to submit the Capacity Building for Flood Resilience in Southern Virginia -- Phase 1 application to the Virginia Community Flood Preparedness Fund. Further, the Town of South Boston has the fiscal resources in the FY2021-2022 budget to contribute \$5,541.00 as the per capita share of the required ten percent (10%) local cash match for the project in partnership with the City of Martinsville and the Town of Halifax.

lona Thomas S. Raab

Town Manager 455 Ferry Street South Boston, VA 24592



455 Ferry Street • South Boston, Virginia 24592 • 434.575.4200 • traab@southbostonva.us

October 14, 2021

TRANSMITTED VIA ELECTRONIC MAIL

Dr. Arthur Small and Mr. Bryan David Weldon Cooper Center for Public Service University of Virginia Charlottesville, VA

RE: Virginia Community Flood Initiative

Dear Dr. Small and Mr. David:

This letter confirms the Town of South Boston's interest in the above-referenced undertaking by the Weldon Cooper Center for Public Service (Cooper Center) and the School of Engineering and Applied Sciences (School of Engineering) to develop an application to be submitted to the Virginia Community Flood Preparedness Fund (VCFPF) managed by the Virginia Department of Conservation and Recreation (VDCR).

You and your colleagues may proceed to prepare an application on behalf of the Town of South Boston for submission to the VCFPF for a grant to fund the following work:

<u>Assessment and Roadmap (Phase I)</u> – identifying, inventorying, and evaluating existing data, plans, resources, methods for data collection and analysis, and related information; and developing a roadmap (time-line) for future phases of VCFPF grant-funded plans and projects.

Following a review of the final application and upon the Town of South Boston's approval, the application will be submitted to the VCFPF Round #2 deadline set for Friday, November 5th, at 4:00 pm.

The Cooper Center will coordinate and include the Town of South Boston's application as part of a joint application being developed by the Cooper Center and the School of Engineering, the Town of Halifax, and the City of Martinsville. These applications will be coordinated with the Southside Planning District Commission for submission to VCFPF.

Dr. Arthur Small Mr. Bryan David October 14, 2021 Page – 2 -

By mutual agreement, the ten percent (10%) local cash match required by the VCFPF will be shared through a per capita contribution between the Town of Halifax, the City of Martinsville, and the Town of South Boston, as follows:

VCFPF Assessment and Roadmap Budget (Phase I) = \$150,000.00 Local Cash Match = \$15,000.00

la mara di a di a di

The total population for these localities is 21,562 (2020 US Census), which computes to a per capita rate of \$0.695 and a rounded contribution of:

	Population	
Town of Halifax	1,188	\$ 831
Town of South Boston	7,966	5,541
City of Martinsville	12,408	8,629
		\$ 15,000

The Town of South Boston and I look forward to working with the Cooper Center, the School of Engineering, our partner communities, and the Southside Planning District Commission to successfully access the Virginia Community Flood Preparedness Fund.

Yours truly,

Thomas S. Raab

Thomas S. Raab Town Manager

cc: Carl Espy, IV, Town Manager, Town of Halifax
 Leon E. Towarnicki, City Manager
 Deborah Gosney, Executive Director, Southside Planning District Commission

APPENDIX D: PROJECT AREA MAPS AND FIRMETTES

Project Area Map

Social Vulnerability Index Score Map

Flood Hazard Zone Map – Martinsville

Flood Hazard Zone Map – Halifax

Flood Hazard Zone Map – South Boston

Flood Event – Martinsville – Cherokee Trail

Flood Event – Halifax – Banister Dam

Flood Events – South Boston

FIRMette – Martinsville – Cherokee Trail

FIRMette – Halifax – Banister Dam

FIRMette – South Boston – Hupps Mill Plaza

FIRMette – South Boston – Riverdale

Project Area Map



Social Vulnerability Index Score Map



Ν CR 622 SR 45 US 58 Business;SR Martinsville SR 457 US 58 Business; SR 5 US 220 Business;SR Martinsville US 58 Business;US 220 Business **** US 58 Business CR 752 1.2 Miles 0.3 0.6 US 220 Business 0 Dug Ma

Flood Hazard Zone Map – Martinsville

Flood Hazard Zones

High Risk Flood Zone
 Moderate Risk Flood Zone

Regulatory Floodway
City of Martinsville

Flood Hazard Zone Map – Halifax



High Risk Flood Zone
Moderate Risk Flood Zone

Regulatory Floodway
Town of Halifax



Flood Hazard Zone Map – South Boston

Flood Hazard Zones

High Risk Flood Zone
 Moderate Risk Flood Zone

Regulatory Floodway
Town of South Boston



Flood Event – Martinsville – Cherokee Trail





October 2018: Banisterm Dam is nearly overtopped following Tropical Storm Michael

Flood Events – South Boston





Legend

79°51'10"W 36°40'2"N SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT Without Base Flood Elevation (BFE) Zone A. V. A9 With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD HAZARD AREAS **Regulatory Floodway** 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes. Zone X OTHER AREAS OF FLOOD HAZARD Area with Flood Risk due to Levee Zone D NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs OTHER AREAS Area of Undetermined Flood Hazard Zone D - — – – Channel, Culvert, or Storm Sewer GENERAL STRUCTURES LIIII Levee, Dike, or Floodwall **CITY OF MARTINSVILLE** 20.2 Cross Sections with 1% Annual Chance 510095 17.5 Water Surface Elevation AREAOFMINIMAL FLOOD HAZARD **Coastal Transect** Mase Flood Elevation Line (BFE) Zone > Limit of Study Jurisdiction Boundary **Coastal Transect Baseline** OTHER **Profile Baseline** 51089C0161C 51089C0162C FEATURES eff. 9/26/2008 Hydrographic Feature eff. 9/26/2008 **Digital Data Available** No Digital Data Available MAP PANELS Unmapped The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/26/2021 at 2:59 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for 79°50'32"W 36°39'33"N Feet unmapped and unmodernized areas cannot be used for

250

500

1,000

1,500

1:6.000 2.000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

regulatory purposes.



Legend



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020



Legend

78°55'2"W 36°43'5"N SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT Without Base Flood Elevation (BFE) Zone A. V. A9 With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD AREA OF MINIMAL FLOOD HAZARD HAZARD AREAS **Regulatory Floodway** Zone') 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes. Zone X OTHER AREAS OF FLOOD HAZARD Area with Flood Risk due to Levee Zone D 397/FEE1 C. NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs OTHER AREAS Area of Undetermined Flood Hazard Zone D - — – – Channel, Culvert, or Storm Sewer GENERAL STRUCTURES LIIII Levee, Dike, or Floodwall 20.2 Cross Sections with 1% Annual Chance 17.5 Water Surface Elevation Town of South Boston **Coastal Transect** Mase Flood Elevation Line (BFE) 510153 Limit of Study Zone AE Jurisdiction Boundary Zone AE **Coastal Transect Baseline** OTHER **Profile Baseline** 51083C0408D FEATURES Hydrographic Feature eff. 10/16/2009 **Digital Data Available** No Digital Data Available MAP PANELS Unmapped RODWAY The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/26/2021 at 2:51 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for 78°54'24"W 36°42'36"N Feet 1:6.000 unmapped and unmodernized areas cannot be used for regulatory purposes. 250 500 1,000 1,500 2.000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020



Legend



APPENDIX E: NEED FOR ASSISTANCE - MARTINSVILLE

Martinsville 2010/2020 Census Tract Map Martinsville Social Vulnerability Index Score Map Martinsville Opportunity Zones, Census Tracts 1 and 2 Martinsburg Community Income Profile

City of Martinsville

Census Tracts

The City of Martinsville is composed of five census tracts (numbered 1-5 in the map below) and is adjacent to six census tracts (101, 102, 103, 105, 106.02, and 108).



Martinsville 2010/2020 Census Tract Map

Source: PolicyMap

Social Vulnerability Index Scores

Adapt Virginia's Vulnerability Viewer indicates that three of Martinsville's five census tracts have a "very high" social vulnerability index score, one has a "high" social vulnerability index score, and another has a "low" social vulnerability index score.



Martinsville Social Vulnerability Index Score Map

Source: Adapt Virginia, Virginia Vulnerability Viewer, Social Vulnerability Index Score

Legend - Social Vulnerability Index Score

- Very Low Social Vulnerability (Less than -1.0)
- Low Social Vulnerability (-1.0 to 0.0)
- Moderate Social Vulnerability (0.0 to 1.0)
- High Social Vulnerability (1.0 to 1.5)
- Very High Social Vulnerability (More than 1.5)

Opportunity Zones

Two census tracts in Martinsville (**1** and **2**) qualify as Opportunity Zones. American Community Survey (ACS) 2015-2019 five-year estimates indicate that median household income is about \$28,703 in census tract **1** and \$29,519 in census tract **2**, or about 39 and 40 percent of Virginia statewide median household income, respectively.

Martinsville Opportunity Zones, Census Tracts 1 and 2

The county of Martinsville city, Virginia has 2 designated Opportunity Zones.

In total these Opportunity Zones have a population of approximately 5,000. That represents 39% of the county's total population of 13,000.

The **median household income** for Martinsville city Opportunity Zones ranges from approximately **\$29,000 to \$30,000**.

The adjacent map shows all Opportunity Zones in Martinsville city. Click on any Opportunity Zone for additional information.

Source:OpportunityDb



Martinsburg Community Income Profile



Source: Social Explorer; U.S. Census Bureau

APPENDIX F: NEED FOR ASSISTANCE - HALIFAX

Map F-1A – Halifax 2010 Census Tract Map Map F-1B – Halifax 2020 Census Tract Map Halifax Social Vulnerability Index Score Map Halifax Opportunity Zone, Census Tract 9306 Halifax Community Income Profile

Town of Halifax

Census Tracts

The Town of Halifax is mostly contained within 2010 census tract **9306** (**Map F-1A**). This tract was divided into two new tracts in 2020 (**9306.01** and **9306.02**; **Map F-1B**). A very small section of the town boundary crosses over into census tract **9302.02**.





Source: PolicyMap



Map F-1B – Halifax 2020 Census Tract Map

Source: PolicyMap

Social Vulnerability Index Scores

All 2010 census tracts associated with Halifax have "very high" social vulnerability index scores.



Halifax Social Vulnerability Index Score Map

Source: Adapt Virginia, Virginia Vulnerability Viewer, Social Vulnerability Index Score

Legend - Social Vulnerability Index Score

- Very Low Social Vulnerability (Less than -1.0)
- Low Social Vulnerability (-1.0 to 0.0)
- Moderate Social Vulnerability (0.0 to 1.0)
- High Social Vulnerability (1.0 to 1.5)
- Very High Social Vulnerability (More than 1.5)

Opportunity Zones

The 2010 census tract **9306** is designated as an Opportunity Zone. The vast majority of Halifax is contained within this census tract, and this tract is also one of South Boston's two primary census tracts.

Halifax Opportunity Zone, Census Tract 9306



Source:OpportunityDb

Halifax Community Income Profile



Source: Social Explorer; U.S. Census Bureau

APPENDIX G: NEED FOR ASSISTANCE – SOUTH BOSTON

Map G-1A – South Boston 2010 Census Tract Map Map G-1B – South Boston 2020 Census Tract Map South Boston Social Vulnerability Index Score Map South Boston Opportunity Zone, Census Tract 9306 South Boston Opportunity Zone, Census Tract 9308 South Boston Community Income Profile

Town of South Boston

Census Tracts

Most of South Boston is located within two 2010 census tracts (9306 and 9308), with smaller portions of the town located in census tracts 9303.01, 9304, and 9305. The 2010 census tract 9306 was divided into two new tracts in 2020 (9306.01 and 9306.02). Much of South Boston is located in the new 2020 tract 9306.02, with a small portion of the town located in new 2020 tract 9306.01.

Map G-1A – South Boston 2010 Census Tract Map



Source: PolicyMap

Map G-1B – South Boston 2020 Census Tract Map



Source: PolicyMap

Social Vulnerability Index Scores

Of South Boston's two primary 2010 census tracts, one (**9306**) has a "very high" social vulnerability index score, and the other (**9308**) has a "high" social vulnerability index score. Of the three census tracts making up smaller portions of the town, two (**9303.01** and **9304**) have "high" social vulnerability index scores, and one (**9305**) has a "moderate" social vulnerability index score.



South Boston Social Vulnerability Index Score Map

Source: Adapt Virginia, Virginia Vulnerability Viewer, Social Vulnerability Index Score

Legend - Social Vulnerability Index Score

- Very Low Social Vulnerability (Less than -1.0)
- Low Social Vulnerability (-1.0 to 0.0)
- Moderate Social Vulnerability (0.0 to 1.0)
- High Social Vulnerability (1.0 to 1.5)
- Very High Social Vulnerability (More than 1.5)

Opportunity Zones

The 2010 census tract **9306** is designated as an Opportunity Zone. The vast majority of Halifax is contained within this census tract, and this tract is also one of South Boston's two primary census tracts.

South Boston Opportunity Zone, Census Tract 9306



Source:OpportunityDb

Census tract **9308** is one of two of South Boston's primary census tracts and is a federally designated Opportunity Zone.

South Boston Opportunity Zone, Census Tract 9308

Census Tract 9308 is a **Low-Income Community** Opportunity Zone located in **South Boston, Virginia**.

This **4.4 square mile** census tract has a population of approximately **4,600** and is one of 3 Opportunity Zones in **Halifax County**.

The adjacent map shows the location of this Opportunity Zone in Virginia.

- Opportunity Zone
 Demographics
- Virginia OZ Funds
- List of Similar Opportunity
 Zones

Source:OpportunityDb



South Boston Community Income Profile



Source: Social Explorer; U.S. Census Bureau

APPENDIX H: BUDGET DETAILS

Phase I Budget and Work Plan

Phase I Budget and Work Plan by Task
Virginia Flood Resilience Initiative: Southside PDC

Phase I period of performance: Jan-Aug, 2022

Revenues:	
Southside PDC	\$ 150,000
Total revenues:	\$ 150,000

Costs:										
		# months	bas	e rate/month	base	e labor cost	tax	es + fringe	sub	-total
Cooper Center	A. Small	0.63	\$	9,600	\$	6,000	\$	1,662	\$	7,662
	E. Marshall	1.00	\$	6,000	\$	6,000	\$	2,244	\$	8,244
	Data manager	0.50	\$	2,833	\$	1,417	\$	85	\$	1,502
	Students, hourly				\$	5,000	\$	300	\$	5,300
	Public outreach includi	ng two workshops							\$	6,250
	Workshops on Ground	s for project team +	com	munity stakehole	ders					
	Travel + incidentals								\$	1,250
	Subtotal direct costs, C	ooper Center							\$	30,208
Engineering	M. Shafiee-Jood	0.75	\$	10,200	\$	7,650	\$	2,119	\$	9,769
	G. Louis	0.13	\$	14,827	\$	1,853	\$	513	\$	2,367
	J. Goodall	0.13	\$	19,192	\$	2,399	\$	665	\$	3,063
	Grad RA								\$	16,500
	Public outreach includi	ng two workshops							\$	-
	Students, hourly									
	Travel + incidentals								\$	1,500
	Subtotal direct costs, E	ngineering							\$	33,199
Architecture	E. Bassett	0.00	\$	9,000	\$	-	\$	-	\$	-
	Grad RA								\$	10,000
	Public outreach includi	ng two workshops							\$	5,455
	Students, hourly				\$	10,000	\$	600	\$	10,600
	Travel + incidentals								\$	1,250
	Subtotal direct costs, A	rchitecture							\$	27,305
Total UVA direct costs									ć	00 712
Total OVA ullect costs									Ş	90,712
Overhead, Cooper Center									\$	18,578
Overhead, Engineering									\$	20,418
Overhead, Planning									\$	16,793
UVA total costs									\$	146,500
Subcontract, B. David									\$	2,500
Southside PDC/locality worksho	pp and local expenses								\$	1,000
Total costs									\$	150,000

Task #	Task	Description	Primary Lead	Support	Task Allotment	% of Total Budget
		Conduct a baseline flood risk analysis,				
		identify areas that flood regularly and evaluate current infrastructure and vulnerability with the goal of determining which areas are vulnerable				
1	Conduct baseline flood risk analysis	to flooding and likely flooding mechanisms.	Engineering		29,451	20%
2	Evaluate existing "hard" resources	Identify and evaluate the status of existing data, plans, policies, and resources that are necessary to inform the development of a successful resilience plan. Identify gaps in information.	Engineering lead on flood- related and geographic data; Planning lead on land use, planning policy. Coordination will be needed for certain topics such as equity, engagement, etc.	Cooper Center	43.000	29%
2	Evaluate existing "soft"	Evaluate "soft" capacities in each community. Assess staff training, resource capacity, certification (Certified Floodplain Manager), and succession	Contras Contras	Disories	45,000	449/
3	capacities	Examine current channels of community engagement; conduct stakeholder mapping exercises and eval uate how existing channels of engagement can be improved and expanded to ensure diverse perspectives are includ	Cooper Center	Planning	15,921	11%
4	Stakeholder Mapping	ed and equity is addressed throughout the planning process. Interview stakeholders in order to gain a better understanding of the cascading effect of flood events and to identify equitable ways of	Planning	Cooper Center	16,998	11%
5	Stakeholder Interviews	ensuring benchmarking reflects diverse interests.	Planning	Cooper Center	14,631	10%
6	Develop Roadmap	Develop a roadmap and timeline for the preparation of future VCFPF planning, studies, and projects grant applications.	Cooper Center	Engineering	10,999	7%
7	Project Management	Project Management, coordination, primary liasion with localities and PDC	Cooper Center		18,000	12%
8	Locality Outreach		PDC		1,000 150,000	1% 100%

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